

KANSAS FARMER

ESTABLISHED IN 1863.
VOL. XXXVI. NO. 35.

TOPEKA, KANSAS, THURSDAY, SEPTEMBER 1, 1898.

SIXTEEN TO TWENTY
PAGES—\$1.00 A YEAR.

BREEDERS' DIRECTORY.

Cards will be inserted in the Breeders' Directory as follows: Four line card one year, \$16.00; six lines, \$23.00; ten lines, \$30.00; each additional line \$3.00. A copy of the paper will be sent to the advertiser during the continuance of the card.

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.

CATTLE.

ROCK HILL HERD OF SHORT-HORNS—Straight R and cross-bred Scotch and Bates; good as the best. A No. 1, all red, 19 months old bull \$150. J. F. True, Newman, Kas.

FAIRVIEW STOCK FARM—Registered Short-horn cattle. Royal Bates 2d No. 124404 at head of herd. Young stock for sale. E. H. Littlefield, Newkirk, Oklahoma.

ENGLISH RED POLLED CATTLE—PURE-BRED. E Young stock for sale. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo. Mention this paper when writing.

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Lord Lieutenant 120019 at head of herd. Young bulls and heifers for sale. Address D. F. Norton, Council Grove, Kas.

SWINE.

D. TROTT ABILENE, KAS., famous Duroc-Jerseys and Poland-Chinas.

CENTRAL KANSAS HERD OF THOROUGHLY BRED Poland-China hogs. C. S. Snodgrass, Galt, Rice county, Kansas, breeds the best. Stock for sale now. Come or write.

KAW VALLEY HERD POLAND-CHINAS—One of the best sons of Chief I Know at the head. Pairs and trios not akin; of all the leading strains. M. F. Tatman, Rossville, Kas.

S. F. GLASS, Marion, Kas., breeder of thoroughbred S. Jersey cattle, Poland-China and Large English Berkshire hogs, M. B. turkeys, B. P. Rock and S. C. White Leghorn chickens, peacocks, Pekin ducks and Italian bees.

KANSAS HERD OF POLAND-CHINA SWINE.—Has five choice yearling sows bred to my black U. S. boar, and one Tecumseh boar and thirty-five fall pigs by Model Sanders (20492) by Kiever's Model. They have typical ears and show fine markings. Address F. P. Maguire, Haven, Kas.

POULTRY.

EXCELSIOR POULTRY AND FRUIT FARM
TOPEKA, : : KANSAS.
We are now well established in our new location, with plenty of free range, and the finest lot of young chicks we ever had. Stock growing finely, and will be ready to offer October 1, 1898. Write your wants and I will quote prices. A full line of Poultry Supplies.
C. B. TUTTLE, Proprietor.

PURE-BRED POULTRY.
Barred P. Rocks, White P. Rocks, Partridge Cochins, White Cochins, Light Brahmas, S. L. Wyandottes, White Wyandottes, Black Javas, Brown Leghorns, White Leghorns, Buff Leghorns, Silver Spangled Hamburgs, Pearl Guineas and Pekin Ducks. Two hundred this year's breeders for sale. Also 500 Spring Chickens, ready to ship after the first of July. Prices lower than any other time of the year. Circular free.
A. H. DUFF,
Larned, Kas.

ROCKS WHITE and BLUE BARRED
Empire, Lash and Conger Strains.
Eight years experience in breeding Rocks exclusively. Have the best young stock this year I have ever raised. Fertile, high-scoring, prize-winning birds. Two hundred pullets and cockerels now ready for shipment. A few cockerels from E. B. Thompson eggs for sale. Write for descriptive circular and prices. Printed recipe for making and using Liquid Lice Killer, 25c. Address
T. E. LEFTWICH, Larned, Kas.

SWINE.

M. H. ALBERTY, Breeder of Registered **CHEROKEE, KAS. DUROC-JERSEY SWINE.** Baby Pig Teeth Clippers, 35 cents by mail.

Thoroughbred Duroc-Jersey Hogs
Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. Stonebraker, Panaola, Ill.

SWINE.

BOURBON COUNTY HERD BERKSHIRES.
J. S. MAGERS, Proprietor, Arcadia, Kas. Correspondence invited. Satisfaction guaranteed.

V. B. HOWEY, TOPEKA, KAS.
Breeder and shipper of thoroughbred Poland-China and Large English Berkshire swine and Silver-Laced Wyandotte chickens.

THE SEDGWICK NURSERY CO.,
Sedgwick, Harvey Co., Kas.,
—Breeders of—

Short-horn Cattle and Poland-China Swine
Of the Best Strains.
Stock for sale. Correspondence and inspection invited.

HEADQUARTERS FOR POLAND-CHINAS
IN KANSAS IS AT SHADY BROOK
STOCK FARM,
H. W. CHENEY, Prop., NORTH TOPEKA, KAS.
Cheney's Chief I Know 19513 (S) at head. All popular strains represented in matrons. Write for prices, which are always reasonable. Buyers met at train and shown stock free.

Wamego Herd Imp. Chester Whites and Poland-Chinas.
Mated for best results. Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER.
C. J. HUGGINS, Proprietor, Wamego, Kas.

VERDIGRIS VALLEY HERD PEDIGREED POLAND-CHINAS.
Two hundred head, four herd boars, 150 spring pigs. An extra lot of September boars and gilts for sale. Prices reasonable. Farmers and Stock Hog Raisers cordially invited to write or visit us.
WAIT & EAST,
Altoona, Wilson Co., Kas.

SIXTEEN TO ONE HERD
REGISTERED POLAND-CHINA SWINE.
Herd boars, Gold Standard Wilkes by Guy Wilkes 2d 17777 S. and Ideal Quality by Darkness Quality 2d 14361 S. Brood sows, Tecumseh, Black U. S. and Wilkes. Thirty spring pigs, both sexes, ready to go. Farm two miles north of Welda.
J. M. COLLINS, Welda, Anderson Co., Kas.

PURE-BRED POLAND-CHINAS.
Spring crop of pigs by Wren's Model, What's Wanted Wilkes and Tanner by Hildebrecht. Dams by Black Corwin, Wren's Medium, Protection Boy, Moss Wilkes Tecumseh, Hadley M. Washington. Got a Corwin Sensation, Darkness 1st, or Moss Wilkes Maid boar before my sale this fall. Some extra fine gilts for sale now. Tanner pigs are marked perfectly and have fine finish. Write me for particulars.
J. K. WILLSON, Marion, Kas.

HIGHLAND FARM HERD PEDIGREED POLAND-CHINAS.
One hundred head. Bred sows in pig to herd boars, Corwin I Know 18448 S., he by the great Chief I Know 19922 S., and others to Hadley U. S., a son of the great Hadley, Jr. 13314 S. Also ten extra choice fall boars and twelve gilts for sale at reasonable prices, breeding and quality considered. Fifty spring pigs by seven different noted sires. Write or visit the farm.
John Bollin, Kickapoo, Leavenworth Co., Kas.

PLEASANT VALLEY HERD
REGISTERED POLAND-CHINA SWINE
King Perfection 4th 18744 S. at head of herd, assisted by Tecumseh Wilkes 12694 S. and Lambing Ideal 14050 S. The sire of last named is Gov. C. by Black U. S. We have added several very finely bred sows to our herd. Write for particulars. Address either
W. E. JOHNSON, E. A. BRICKER,
Colony, Kas. Westphalia, Kas.

M. C. VANSELL,
Muscotah, Atchison, County, Kansas,
Breeder of Pure-bred Poland-China Swine and Short-horn Cattle of the most desirable strains.
For Ready Sale Thirty Poland-China Bred Sows
One and two years old, bred for fall farrow; very choice; price low if ordered soon; must make room for 170 pigs now on hand. Come and see or write.

MEADOWBROOK HERD.
J. R. KILLOUGH & SONS,
Ottawa, Kansas.
We have for sale 25 pigs by J. R.'s Tecumseh of March and April farrow. Also a few females of choice quality not registered.

SWINE.

D. L. BUTTON, North Topeka, Kas., breeder of Improved Chester Whites.
Stock for sale. Farm 2 miles northwest of Reform School

RIVERDALE HERD of D. Chester White swine and Light Brahma poultry. J. T. LAWTON, BUTTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

Standard Herd of Poland-Chinas
A choice lot of gilts sired by Ideal U. S. and bred to Tecumseh Chief. Also some good Tecumseh Chief gilts bred to Look Over Me (he by old Look Me Over) and some good fall pigs, both sexes. Write and get my prices or come and see.
WM. MAGUIRE, Haven, Kas.

T. A. HUBBARD,
Rome, Kansas,
Breeder of **POLAND-CHINAS and LARGE ENGLISH BERKSHIRES.** Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

BLUE MOUND HERD BERKSHIRE SWINE.
Herd boars, Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also bred Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.
Allen Thomas, Blue Mound, Linn Co., Kas.

Nation's Poland-Chinas.
Fifty boars and gilts for this season's trade. My herd boars consist of Darkness Quality 14561, Princeton Chief 14545, Col. Hildebrecht 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited.
LAWRENCE NATION, Hutchinson, Kas.

SUNFLOWER HERD OF SHORT-HORN CATTLE and POLAND-CHINA SWINE.
125 head in herd, with Sir Knight 124403 at the head. Females are by such imported Cruickshank bulls as Craven Knight 96223, Thistle-top, Master of the Rolls, Earl of Gloster 74523, Viscount Richmond, Knight Templar 69658, etc. Forty very choice brood sows. Young stock for sale.
ANDREW PRINGLE, Harveyville, Kas.

POLAND-CHINAS.
Guy Darkness 18292 and Best Nims 19612, herd boars. Sept. '97 boars and gilts for sale. Guy Darkness gilts will be bred to Best Nims for fall farrow. Correspondence or inspection of herd solicited.
S. W. HILL, Hutchinson, Kas.

ROSE POLAND-CHINAS
CREEK ARE SECOND TO NONE.
FARM READ THIS SPECIAL OFFER:
Will offer early spring pigs weighing 200 pounds during September for \$17 each, delivered at any railroad station in Kansas or Nebraska.
H. WOODFORD, Mgr., Chester, Neb.

Mains' Herd Poland-Chinas
Headed by the two grand sires, One Price Chief 20114, he by Chief Tecumseh 2d 9115, out of Alpha Price, she by One Price 4207; Model Combination 19853, grandson of Kiever's Model, on sire's side, and of Chief Tecumseh 2d on dam's side. I have pigs from other noted boars mated to a selected lot of sows as good as are known to the breed. A very fine lot of fall and spring pigs and quite an extra lot of bred sows of different ages. I will give very reasonable prices on all stock. Satisfaction guaranteed.
James Mains, Oskaloosa, Jefferson Co., Kas.

E. E. AXLINE, Oak Grove, Mo.
POLAND-CHINAS.
Most Fashionable Strains.
MODEL BOY, WESTERN WILKES, } Now in Service.
YOUNG STOCK FOR SALE.

SWINE.

SUNNYSIDE HERD PEDIGREED POLAND-CHINAS.
Herd Boars are Grand Sons of J. H. SANDERS and SHORT STOP, the World's Fair Prize Winners. Bred to 20 large mature sows of Corwin Black U. S. and Black Bess blood. We aim to produce the money-makers, not sacrificing size and feeding qualities to fancy points. Choice young stock for sale at reasonable prices.
M. L. SOMERS, Altoona, Kas.

THE WILKES QUALITY HERD OF POLAND-CHINA SWINE.
Thos. Symms, Prop., Hutchinson, Kas.
Herd boars, Darkness Quality and Guy Wilkes. For ready sale 45 very choice pigs, out of Bessie Wilkes, Beauty Sedom, Chief I Know, Standard Wilkes, Ideal Black U. S. and Chief Tecumseh 2d sows.

F. L. and C. R. OARD, Proprietors,
HEDGEWOOD HERD OF POLAND-CHINAS
VASSAR, KANSAS.
Popular Blood. Individual Merit.
Brood sows of the most popular strains and individual merit. The best that money can buy and experience can breed. Farm one and one-half miles south and half mile east of Vassar, Kas., on Missouri Pacific railroad.

SHEEP.
SEVENTY-FIVE HEAD OF SHEEP FOR SALE—Pure-bred Cotswold and American Merinos. This includes our tops and show sheep; must be sold by October 1; rams and ewes, all five years old and under. Write at once to Hague & Son, Box 140, Walton, Harvey Co., Kas.

SHROPSHIRE RAMS.
A splendid lot of spring lambs at low prices. Two extra fine Cotswold buck lambs.
Write your wants, or better, come and select.
Address,
J. C. STONE, JR.,
Leavenworth, Kas.

CATTLE.
NORWOOD SHORT-HORNS—V. R. Ellis, Gardner, Kas. Rose of Sharons, Lady Elizabeths and Young Marys. Highest breeding and individual merit. Young bulls by Godwin 115676 (head of Linwood herd). Sir Charming 4th now in service.

SILVER CREEK HERD SHORT-HORN CATTLE.
Scotch and Scotch-topped, with the richly-bred Champion's Best 114671 in service. Also high-class DUROC-JERSEY SWINE. Can ship on Santa Fe, Frisco and Missouri Pacific railroads.
J. F. STODDER, Burden, Cowley Co., Kas.

CLOVER CLIFF FARM.
Registered Galloway Cattle. Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbo, 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.

DEER PARK FARM.
H. E. BALL, Proprietor.
Registered Jersey cattle. Young bulls and heifers for sale.
Registered Poland-China swine. Young boars for sale.
Farm two miles east of Topeka on Sixth street road.
T. P. CRAWFORD, Mgr., Topeka, Kas.

SUNRISE STOCK FARM.
C. A. STANNARD, Prop., Hope, Kas.
Breeder of Hereford Cattle and Large English Berkshire Hogs.
Bulls in service: Kodax of Rockland 40731, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 8 to 7 years old for sale.

Agricultural Matters.

HOW TO MAKE CEMENT FLOORS.

I speak from an experience of several years in the use of this material [cement], as all of my stables are floored with it, also a feed room, barn cellar, a hog and poultry house, and I have also 500 square feet of outside walk. I have failed to find a single objection to it. Some have suggested that it was too hard for horses' feet, others that it was too cold for animals to lie on; but in answer to both of these objections I would say that we keep the stables bedded so thoroughly that the horses' feet rarely touch the floor, and it makes it sufficiently warm. It is the cheapest floor, durability considered, that can be made, costing in a hog or poultry house less than a common plank floor; but in a horse stable, where a topping of one inch is needed, about the same. I have rarely had a plank floor in a stable that would last five years without repairs, but a floor laid of good cement will last for generations. I would never lay a floor of the cheap grades of cement, as if laid with such material it usually breaks and does not give satisfaction, and while such cement can be bought for about \$1.25 a barrel, it costs about as much to make a given amount of floor from it as with Portland cement, costing about \$3 per barrel, for with the latter eight barrels of gravel, or five of gravel and five of broken stone, can be used with each barrel to make the concrete foundation, and two barrels of sand to each barrel of cement for the topping or finishing coat; while with the cheap grades of cement only three parts of gravel to one of cement should be used in the foundation, and equal parts of sand and cement for the finishing coat, so that an equal amount of money invested in the two kinds will produce about the same amount of finished floor, and while the work from the cheap grade of cement would be injured by extreme cold, the Portland cement will endure any degree of temperature, in proof of which I will state that scores of miles have been laid with it in St. Paul and Minneapolis, where the mercury often registers 30° to 40° below zero. Experts charge from \$3 to \$5 per day for laying cement floors, but any farmer who will follow the directions given here can make as good a floor as is needed, and need not pay out any wages for skilled labor. In localities where stone is expensive the foundation of any building can often be made of cement much cheaper than with masonry, and if I were building a basement barn I would first make a floor, excavating where the posts are to stand to a solid foundation, and filling with concrete, and then set the posts directly on the floor or on a raised pillar of cement, which can be made by using a frame or box of the height that the pillar is wanted. There should be six inches of good gravel or finely-broken stone as a foundation on before the laying of the floor begins, and then in the horse stable five inches of concrete and one inch of topping; in the cow stable, three inches of concrete and one-half inch of topping, and the same for a hog house, carriage house, or a coal house, and a still lighter topping in a poultry house.

HOW THE CONCRETE IS MADE.

The concrete is made by mixing eight parts of clean gravel with one part of Portland cement. Or if finely-crushed stone is used (no piece larger than one inch in diameter) for the concrete, ten or twelve parts can be used to one part of Portland cement. This concrete should be mixed thoroughly dry, shoveling it over three or four times and then at the last mixing be sprinkled from a fine rose watering pot, enough to thoroughly dampen it, when it is ready to use. We lay the floor in sections, three or four feet wide, so that we can easily reach across it to trowel it. We put up a 2-inch piece and stake it to make the width needed, wheel the dampened concrete in, spread it evenly two inches at a time and ram solid, and so continue until within one inch of the top in the horse stable, or one-half inch for the cow stable or hog house. The top coat is made with two parts of sharp, clean sand and one of cement, thoroughly mixed and tempered, and liquid enough so that it will flow readily. See that the corners and edges are all well filled in and in the horse stable make the floor perfectly level, but in the cow stable give a fall of one inch from the manger to the manure ditch, which should be five feet. To prevent slipping, at the back of each stall make grooves, for two feet in the soft mortar, running crosswise four inches apart, and the same across the doorway where the horses step in. We make these grooves by laying down a

broom handle and tapping with a hammer until it is bedded half its diameter.

When a section of the floor is laid, carefully take up the edge piece, moving it to the same distance and lay another section and so continue until the floor is finished. Keep the building closed so that no stock, or even chickens, can get in while the cement is soft; but it will harden in about twelve hours so that it can be walked over. Sprinkle thoroughly with a watering pot twice a day for ten days, when it will be hard enough to put the horses in it.

As you make the floor set blocks in at the proper angle where the studding are needed to partition the stalls, and after the mortar has hardened take them out and it will leave a mortise for the foot of the studding. In addition to the durability of the cement floors there are several other advantages. They afford no harbor for rats, save all the liquid and never become saturated so as to give off offensive odors in the stables as a plank floor will.

We make the floor in the cow stable five feet long from the manger back to the manure ditch, then if we have small cows we put an extra board next to the manger to keep them back six or eight inches, so as to reduce the length of the stall. I prefer a manure ditch two feet wide at the top and twenty inches in the bottom; this gives a slope of two inches each side of the ditch which we make eight inches deep. The door to the cow stable should be directly at the end of the ditch and then the cows will always walk in through the ditch to their stalls. Back of the manure ditch we make a walk also of cement, two and one-half feet wide and on a level with the floor on which the cows stand. There are two advantages in a manure ditch of these dimensions; first, that cows will rarely soil the walk; second, although it is best usually to clean the ditch every day, in case of bad weather or extra work, it can be left one or more days without cleaning by simply adding more bedding, as we always bed the ditch as well as the floor. Our manger has a cement floor raised a few inches higher than that on which the cattle stand and is made six feet wide with a row of stock at each side of it.—Waldo F. Brown, Butler county, Ohio.

Bonebrake on Kansas.

In response to the call of States at the Bankers' convention, at Denver, last week, Mr. P. I. Bonebrake, President of the Central National bank, of Topeka, made the following summary for Kansas:

"Last year, 1897, she [Kansas] marketed \$136,355,000 worth of productions of the farm, orchards, live stock and poultry. To this may be added a total production of coal, lead, zinc, salt and smelting products of the value of \$26,996,000; making a grand total of \$163,345,000 for one year for Kansas. Our mining industries are yet in their infancy.

"The total value of all precious metals produced in the United States in the year 1897 amounted to \$142,853,000, being \$23,000,000 less in value than the productions of the farms and mines of Kansas for the same year.

"For any period of ten years, our average productions will equal any State in the Union per acre or per capita. Ten years ago the Eastern capitalists chased our farmers along the corn rows to loan them money, until their heads were turned. We built too many railroads, school houses, water-works, court houses, electric plants, business blocks, etc. (Almost every city and village had all these.) In all these things we kept pace with States 100 years old. In a word, we lived too fast, and as a result a reaction came, and we went to the low water mark. But for five years past, we are on the up grade, paying our debts and utilizing our resources. Financially we are all right.

"The State has no State debt, and in the period just named more than half our municipal and mortgage debt has been paid. Where the debt has matured and not paid in many instances the mortgage or municipal debt has been refunded at from 4 to 5 per cent. interest.

"We have just harvested an immense wheat crop, and if we only had another Joe Leiter to 'corner' the wheat, our people would be out of debt in a year. On July 14 last our national banks had over an average reserve of 33.69. Reports of State banks not in yet. We have an excellent State banking law, ably administered. Deposits and reserve are larger than ever before. Unfortunately for the banking interests, the rate has decreased to the prosperity of the State. The interest rates have gone down from 8 and 10 per cent. to 6 and 8 per cent.

"The harvest time for Kansas bankers is spring and fall. At those times the

live stock men borrow to carry their cattle, sheep and hogs for the spring and fall markets. To those unfamiliar with the live stock business of the West, this interest is not appreciated. One little city in Kansas of 40,000 people (Kansas City, Kansas) handled, in 1897, 6,444,000 head of live stock, of a value of \$110,520,000.

"Kansas was best described by Senator Hoar, of Massachusetts. In a speech in the United States Senate, speaking of Kansas, he said: 'There is not another instance on the face of the earth, unless it be in some neighboring State, where a territory has grown up in forty-two years, containing such a population, such wealth, such value of agricultural lands, such vast agricultural products. I should like to know if there is another instance of such prosperity.'

"It is due to Kansas flour, beef, mutton, poultry and eggs that these Eastern brethren look so sleek and well fed.

"With peace and open doors for trade with Porto Rico, Cuba, Hawaii and the Philippines, added to our present commerce, we see no reason why the whole country should not have a long period of prosperity."

Wet and Dry Weather Cultivation.

Editor Kansas Farmer:—How to attain success in raising good crops with a wet, backward spring, as our last was, is worth knowing.

The soil, rightly managed, is capable of contending with long-continued rains and with long-continued droughts. It is necessary to lubricate the ground deeply to prevent friction and facilitate the rapid movement of the water downward. This is not an expensive operation or unreasonable or difficult, and is no secret. However, a large portion of farmers are so busy with their hands they do not think as much as they should. But when their attention is called to this reasonable thing to do recognize the practicability and desirability of it, and still many neglect to put it in practice, and therefore suffer for such neglect.

Every one realizes the fact that the soil, ordinarily, can receive only a limited amount of water without becoming water-soaked to such extent that days, and sometimes weeks, are required to dry it out sufficiently to be worked; and often just before that time is reached another soaking rain comes down uninvited, enforcing further waiting. But the condition would be materially changed if all obstruction to the downward movement of the water were removed. Such a proposition would naturally be met with objections from many, saying if such a condition were possible it would be anything but desirable, "for," say they, "the water would take down with it all the fertility of the soil and leave the top soil leached and poor in the extreme." But not so. If every particle of the soil deep down in the earth was well lubricated each particle would become a conductor, and thus the hindrance to the water going deep into the earth be removed.

The best and only lubricator for the soil is water. But usually there is a hard dry stratum of soil somewhere not far from the surface that must be broken up before it can become a conductor. When that is once done to the depth of twenty or twenty-four inches, the surplus of water passes on down below it, and the result is that the ground remains moist indefinitely, especially if the top soil is stirred occasionally, so water cannot run off from the surface.

This lubrication of the soil removes all hindrance of the free circulation of air and water through the soil. It can come up by capillary attraction as well as go down by gravity. This enables your ground to yield its increase under all conditions of wet or dry weather. I claim the soil is not badly leached, even with a large excess of water, because each particle of soil becomes a conductor for water, and when I say soil, I mean dirt—not coarse sand, gravel, or stone. This latter soil would, without doubt, be badly leached.

"Be sure you are right, and then go ahead," has always been considered a wise maxim. But to be sure you are right and then stay right—there is a wiser one.

I hardly need add, in conclusion, that to subsoil deep by stages is the way to bring the success above mentioned, for surely such a reasonable method would occur to the minds of all thinkers. H.

Meeting Sovereign Grand Lodge, Boston Mass., September 19-24 Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round trip. Tickets on sale September 16 to 18, inclusive, good returning until September 30, inclusive. For particulars address J. Y. Calahan, General Agent, 111 Adams St., Chicago. 59



The Profits From Small Savings.

A Kansas City live stock commission firm was induced by Secretary Coburn to write a prominent packing-house for information relative to how the packers could pay a given price for beef animals on the hoof at the yards, which on the face of it, when compared with prevailing quotations on dressed beef, showed a loss to the packer. The reply, which covers the matter briefly, was as follows:

"The question of how a bullock is cut up, and what prices are realized for the various cuts by the retailer, and the total obtained in that way for a carcass, is, of course, interesting to consumers and to retailers, but I understand from you that what you desired was figures which would be of interest to those who owned the cattle; that is, that you simply wanted to follow the course of a bullock from the time it was sold on the hoof at the yards until it was disposed of by the slaughterer to the butcher. As an example, therefore, we would advise that, on the 20th ult., we bought at the Kansas City yards, forty native cattle, at \$4.55, weighing on the hoof an average of 1,285 pounds. They dressed out 58.8 per cent, thus giving an average weight in the carcass of 756 pounds. The actual cost of the fresh beef dressed, after crediting market value for hides and fat, was \$6.55 per hundredweight, and this grade of beef is sold chiefly in the East. The cost delivered at the seaboard—say New York or Boston—is as below:

Cost at Kansas City, per cwt.....	\$6.55
Freight, per cwt.....	.68½
Iceing and re-iceing, per cwt.....	.09½
Shrinkage, 1½ per cent.....	.11
	\$7.44

"This beef, bought on July 20, was killed the following day, shipped on the 23d ult., and arrived in New York on July 28, and was sold at an average price of \$7.37. This is a fair average, both on cost and selling price, and you naturally say, 'How can you afford to sell beef for even a little less than cost, and have the expense of selling besides?' And right here is where the packer helps the stockmen; because, by the modern method of handling dressed beef, the packer gets quite a little out of the offal, which under the old methods was thrown away. He cleans the entrails and uses them for casing sausage, dries the blood and makes fertilizers from it, pickles the tripe and ships that East, makes glue from the head and sinews, sells the liver, heart, tails and brains through the country, and also the hoofs and horns, and he also cans the tongues.

"It is hard for a packer, under present conditions, to get back 'a new dollar for an old one,' but were it not for these little things dressed beef men couldn't exist, and, as a general proposition, the only reason that the dressed beef men have been able to get along at all is that they make the utmost use of the offal, which under the old method of butchering was practically thrown away."

How's This?

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

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm. WEST & TRUAX, Wholesale Druggists, Toledo, O.

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

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

The Woman's Relief Corps will go to Cincinnati via Santa Fe's special through train, which will leave here (or nearest junction point) on September 5. Round trip ticket from here costs only \$16.10.

The Stock Interest.

THOROUGH-BRED STOCK SALES.

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

SEPTEMBER 8—Hornaday, Young and Turley, Poland-Chinas, Fort Scott, Kas.
 SEPTEMBER 14—W. H. Wren, Poland-Chinas, Marion, Kas.
 SEPTEMBER 23—Winkle Blair, Red Polled cattle and Poland-China hogs, Beulah, Kas.
 OCTOBER 10—Ziegler Bros., Poland-Chinas, McCune, Kas.
 OCTOBER 18—Robt. I. Young and U. S. Byrne, Poland-Chinas, St. Joseph, Mo.
 OCTOBER 19-20—Tom C. Ponting, Herefords and Horses, Mowqua, Ill.
 OCTOBER 24—E. E. Axline, Poland-Chinas, Oak Grove, Mo.
 OCTOBER 25-26—K. B. Armour, Herefords, Kansas City, Mo.
 OCTOBER 31 AND NOVEMBER 1, 2, 3—C. H. Whitman, Herefords, Kansas City, Mo.
 NOVEMBER 3—John Bollin, Poland-Chinas, Kickapoo, Kas.
 NOVEMBER 3—Guss Aaron, Poland-Chinas, Leavenworth, Kas.
 NOVEMBER 15-16—Gudgell & Simpson and Jas. A. Funkhouser, Herefords, Kansas City, Mo.
 NOVEMBER 17-19—W. T. Clay and H. C. Duncan, Short-horns, Kansas City, Mo.
 NOVEMBER 22—George B. Howell, Short-horns, Nettleton, Mo.; sale at Kansas City, Mo.
 NOVEMBER 23—W. P. Harned, Short-horns, Bunce ton, Mo.

CORN, KAFFIR CORN AND SOY BEANS AS PIG FEEDS.

By F. C. Burtis, Kansas Experiment Station.

From the pig-feeding experiments carried on during the winter of 1897-8 the following results are given. The experiments were to compare the feeding value of corn, Kaffir corn and soy beans prepared in different ways and fed to pigs of different ages. The pigs used were full-blood Poland-China and Berkshire.

SERIES I.

Series I included thirty head, averaging 7½ months old and 188 pounds in weight. They were divided into six equal lots and fed as follows:

- Lot I.—Whole Kaffir corn, fed dry.
 - Lot II.—Whole Kaffir corn, soaked forty-eight hours.
 - Lot III.—Kaffir corn meal.
 - Lot IV.—Shelled corn, fed dry.
 - Lot V.—One-half Kaffir corn meal and one-half corn meal.
 - Lot VI.—Four-fifths Kaffir corn meal and one-fifth soy bean meal.
- (Unless otherwise stated the feed was mixed with water as fed.)

These hogs were in very good condition at the beginning of the experiment, November 15, and many of them could have been turned off as light hogs. Each lot had enclosed sleeping quarters and small open pens. The feeding continued seven weeks, and at the close the lots compared as follows:

LOT.	Total Pounds Feed Eaten.	Total Pounds Gain.	Average Daily Gain per Head, Pounds.	Pounds Grain Eaten per Pound of Gain.	Cost per Pound of Gain, Cents.	Net Return Over Cost of Feed.
I.....	1,846	340	1.38	5.42	3.42	\$30.16
II.....	2,100	390	1.34	6.36	3.23	28.73
III.....	2,136	453	1.83	4.71	3.35	34.53
IV.....	1,678	368	1.50	4.56	1.71	34.20
V.....	2,136	468	1.91	4.56	2.09	36.82
VI.....	2,122	519	2.11	4.08	2.44	34.72

While the above differences in gains made no marked difference in the conditions of the pigs, a close buyer would have put the following selling prices: On lots I and II, \$3 per hundred; lot IV, \$3.10; and lots III, V and VI, \$3.25 per hundred. According to our market, prices for feeds are as follows per hundred-weight: Kaffir corn, whole, 44.64 cents; ground, 50 cents; shelled corn 37½ cents, ground 42 cents; soy bean meal, \$1. At these prices you see from the table above that lot V fed on one-half Kaffir corn meal and one-half corn meal made the greatest net returns (\$36.82) over the cost of feed consumed. Lots III, IV and VI followed closely, with a little over \$2 less per lot. Lot I comes next with \$6.66 less, and lot II, fed on whole Kaffir corn soaked, last, with \$8 less. Further comparison of the lots I and IV shows that a bushel of Kaffir corn produced 10.33 pounds of pork and a bushel of corn 12.23 pounds.

It was noticeable that large amounts of Kaffir corn passed through lots I and II whole. The amount was considerable more in lot II, and this could be accounted for in the way the feed was bolted down. All the lots were given all the feed they would eat up clean. In judging the results, bear in mind the age of the pigs and the condition at the beginning of the feeding.

SERIES II.

In series II there were eighteen shoats, averaging 5-6 months in age and 123 pounds in weight. They were divided into six equal lots. This series was fed just like the one before—lot VII, whole Kaffir corn fed dry; lot VIII, whole Kaffir corn soaked forty-eight hours; lot IX, Kaffir corn meal; lot X, shelled

corn fed dry; lot XI, one-half Kaffir corn meal and one-half corn meal; lot XII, four-fifths Kaffir corn meal and one-fifth soy bean meal. These pigs were in a good, thrifty, growing condition at the beginning of the experiment, November 22. The above feeds were continued eleven weeks, and the following are the results:

LOT.	Total Pounds Food Eaten.	Total Pounds Gain.	Average Daily Gain per Head, Pounds.	Pounds Grain Eaten per Pound of Gain.	Cost per Pound of Gain, Cents.	Net Return Over Cost of Feed.
VII.....	1,330	225	.97	5.91	2.63	.....
VIII.....	1,264	172	.74	7.34	.....	.....
IX.....	1,564	262	1.13	4.98	1.98	\$14.27
X.....	1,326	268	1.16	4.98	1.86	16.16
XI.....	1,626	321	1.37	5.06	2.32	19.33
XII.....	1,638	387	1.87	4.23	2.55	18.07

There was a great difference in the condition of the lots at this time. Lots XI and XII were in marketable order but some pigs in them could have been kept further at a profit. Lots IX and X had one pig each that was marketable but the others were not fat and several weeks of good gains would have been necessary to have finished them up. Lots VII and VIII were in a very poor condition. A pig in each lot had fed very well but the others were mere skeletons. They had made only six or eight pounds of gain during the last five weeks. It looked like sure death to continue them on the same feeds. At the close of this period, a price of \$3.25 per hundred was put on the pigs in lots IX and X and \$3.50 on those in lots XI and XII. Lots VII and VIII were not salable, only as stockers. With the preceding prices of grain and the above prices on the pigs, lot XI, fed one-half Kaffir corn meal and one-half corn meal, gave the largest returns (\$19.33) over cost of feed eaten. Lot XII, fed on four-fifths Kaffir corn meal and one-fifth soy bean meal gave \$12.6 less. Lot X, fed on shelled corn, \$2.37 less; and lot IX, fed on Kaffir corn meal made the lowest returns, or \$5.06 less. Fattening lots VII and VIII, that were fed on dry whole Kaffir corn and Kaffir corn soaked, proved a flat failure. With lot VII, fed on whole Kaffir corn, a bushel of grain made 9.47 pounds of pork, and with lot X, fed on shelled corn, a bushel of grain made 11.24 pounds of pork.

Lots IX, X, XI and XII were dropped from the experiment. At that time, February 7, the feed of lot VII was changed to one-half Kaffir corn meal and one-half corn meal, lot VIII to four-fifths Kaffir corn meal and one-fifth soy bean meal. On February 28, further change was made in both lots by mixing the grain with skim-milk as fed. The pigs took hold of the change readily and were at once transformed into new beings. Five weeks after the first change was made in feed the lots stood as follows:

LOT.	Pounds of Feed Eaten.		Total Pounds Gain.	Average Daily Gain per Head, Pounds.	Cost per Pound of Gain, Cents.	Pounds Grain Eaten per Pound of Gain.
	Grain.	Milk.				
VII.....	700	280	171	1.02	2.21	4.09
VIII.....	675	181	181	1.72	2.54	3.72

This put both lots in very good marketable order and equal to lots XI and XII at a time five weeks before. For this period lot VIII, which was fed on a mixture of Kaffir corn meal and soy bean meal, made somewhat the largest gain, but lot VII, fed on Kaffir corn meal and corn meal mixed, made pork for about one-fourth of a cent per pound less.

Allowing the same selling price for lots VII and VIII as was allowed for XI and XII, \$3.50 per hundredweight, lot VII gave a net return of \$17.08 over the total cost of the feed eaten and lot VIII \$16.11. A comparison between the returns of lots VII and XI still shows a balance of \$2.25 in favor of lot XI, the lot fed on one-half Kaffir corn meal and one-half corn meal in the first period.

No slaughter test was made of the different lots, but some were sold to local butchers and they pronounced the meat from the pigs fed on the mixtures of soy beans to be quite superior and better marbled than the pigs fed on corn or Kaffir corn alone.

SERIES III.

Series III was composed of twenty head of weanling pigs averaging in age 9½ weeks and thirty-five pounds in weight. They were well accustomed to grain feed when the experiment began, November 22, and were in fine, thrifty condition. They were divided into four equal lots and fed as follows:

- Lot XIII.—Kaffir corn meal.
- Lot XIV.—Two-thirds Kaffir corn meal and one-third soy bean meal.
- Lot XV.—Corn meal.

Lot XVI.—Two-thirds corn meal and one-third soy bean meal.

For six weeks the feed of all lots was soaked in water twenty-four hours, but was dropped as it was found not to be of advantage, and the feeds were mixed with water as fed. Besides the above grains all the pigs had the run of an alfalfa pasture where the feed was young and abundant and the pigs made great use of it. All had good, warm sleeping quarters. On January 17, they were taken from the pasture and put in pens. Up to this date the lots had made the following results:

LOT.	Total Pounds Grain Eaten.	Total Pounds Gain.	Average Daily Gain per Head, Pounds.	Pounds Grain Eaten per Pound of Gain.	Cost per Pound of Gain, Cents.
XIII.....	879	198	.70	4.43	2.21
XIV.....	879	275	.98	3.19	2.13
XV.....	799	187	.66	4.27	1.79
XVI.....	799	240	.85	3.32	2.03

*Alfalfa not considered.

All the lots did very well while running in the alfalfa, but lots XIV and XVI made a much better showing than the others. If these hogs were to be considered as breeding stock, lots XIV and XVI were worth from one-half to two-thirds more than lots XIII and XV. For the fattening pen there would be a difference of opinion as to which was worth the most per pound. Granting all worth the same, 4½ cents per pound, lot XIII, fed on Kaffir corn meal, made a net return of \$11.62 over the cost of the grain eaten; lot XIV, fed on two-thirds Kaffir corn meal and one-third soy bean meal, \$13.27; lot XV, fed on corn meal, \$12.19; lot XVI, fed two-thirds corn meal and one-third soy bean meal, \$12.61.

After the pigs were removed to the pens the feeding was continued eight weeks longer and a close was forced at this time on account of disease getting among the hogs. The following are the results for the period:

LOT.	Total Pounds Grain Eaten.	Total Pounds Gain.	Average Daily Gain per Head, Pounds.	Pounds Grain Eaten per Pound of Gain.	Cost per Pound of Gain, Cents.
XIII.....	2,003	371	.66	5.39	2.69
XIV.....	2,407	646	1.15	3.72	2.48
XV.....	2,003	413	.73	4.87	2.04
XVI.....	2,229	602	1.07	3.70	2.26

At the close there was a wide difference between the condition of lots XIII and XV, fed corn meal and Kaffir corn meal, respectively, as compared with lots XIV and XVI fed on the mixtures. The two former averaged 110 pounds and 118 pounds, respectively, and were in a rough, lank condition and, still, while they were making some gains, it was evident that a change of feed would be necessary before many weeks. Lots XIV and XVI averaged 164 and 154 pounds, respectively, and were well developed and rounded out and could have been sold for light fat hogs. Attention is called to the increase in gains of lots XIV and XVI over that of lots XIII and XV, in this period, as compared with the period when all were on alfalfa. For the first period the alfalfa furnished the protein lacking in the grain feeds of lots XIII and XV, and when it was withheld in the last period their gains were at once decreased, while lots XIV and XVI, which were furnished with the proper amount of protein in the soy beans, continued making good gains. As the experiment was prematurely concluded, the most valuable results of the experiment were not reached, but even at this stage many of the results were interesting. Considering the last period, the following number of pounds of pork were produced from one bushel of feed in the respective lots. (A bushel of the mixed feed is considered to weigh 57.36 pounds and the corn and Kaffir corn 56 pounds.) Lot XIII, fed on Kaffir corn meal, 10.33 pounds; lot XV, fed on corn meal, 11.50 pounds; lot XIV, fed on two-thirds Kaffir corn meal and one-third soy bean meal, 15.41 pounds; lot XVI, fed on two-thirds corn meal and one-third soy bean meal, 15.56 pounds. If at the close of the last period, all the pigs had been sold at 3½ cents per pound, there would have been the following net returns above the cost of feed eaten for the two periods, the alfalfa not included: Lot XIII, \$9.22; lot XIV, \$12.70; lot XV, \$12.30, and lot XVI, \$14.42.

SUMMARY.

(With pigs 7½ months old.)

For 100 pounds of gain it required 456 pounds of shelled corn, or 542 pounds of dry whole Kaffir corn, or 636 pounds of whole Kaffir corn soaked forty-eight hours, or 471 pounds of Kaffir corn meal, or 456 pounds of a mixture of one-

Was Never Well

But Hood's Sarsaparilla Has Given Her Permanent Health.

"I was a pale, puny, sickly woman, weighing less than 90 pounds. I was never well. I had female troubles and a bad throat trouble. I came across an advertisement of Hood's Sarsaparilla and had faith in the medicine at once. I began taking it and soon felt better. I kept on until I was cured. I now weigh 103 pounds, and never have any sickness Hood's Sarsaparilla will not cure. My blood is pure, complexion good and face free from eruptions." MRS. LUNA FARNUM, Box 116, Hillsgrove, Rhode Island.

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier.

Hood's Pills are tasteless, mild, effective. All druggists. 25c.

half Kaffir corn meal and one-half corn meal, or 408 pounds of a mixture of four-fifths Kaffir corn meal and one-fifth soy bean meal.

The shelled corn was worth 19 per cent. more than the whole Kaffir corn. Ten per cent. more of the Kaffir corn was eaten, and a large amount of it passed through the pigs unmasterated, which was not the case with the corn. The daily increase in gain was 9 per cent. more with the corn.

There was a loss of 94 pounds of grain or 17 per cent. by soaking the whole Kaffir corn fed dry. There was 14 per cent. more of the soaked Kaffir corn eaten and a large part was wasted by passing through the pigs unmasterated. The daily increase was 3 per cent. more with the dry.

There was a saving of 71 pounds of grain, or 15 per cent., by grinding, which at 25 cents a bushel would be 3¼ cents a bushel for the grinding. The daily increase was 33 per cent. more with the Kaffir corn meal and 15 per cent. less if it was eaten.

There was a saving of 15 pounds of grain in making 100 pounds of gain, or 3.28 per cent. in feeding a mixture of one-half Kaffir corn meal and one-half corn meal over feeding Kaffir corn meal alone. Three per cent. more of the mixture was eaten and the daily increase was 4½ per cent. more rapid.

There was a saving of 48 pounds of grain in making 100 pounds of gain or 12 per cent. in feeding a mixture of four-fifths Kaffir corn meal and one-fifth soy bean meal over feeding a mixture of one-half Kaffir corn meal and one-half corn meal. The daily increase was 10½ per cent. more rapid with the former mixture and practically the same amounts were eaten per day, but the latter would be the more economical under most circumstances. There was a saving of 63 pounds or 15 per cent. in feeding a mixture of four-fifths Kaffir corn meal and one-fifth soy bean meal over feeding Kaffir corn meal alone. Fifteen per cent. more of the mixture was eaten and the daily increase produced by it was 15½ per cent. greater and under a great many conditions would be the most economical feed.

There was a saving of 173 pounds of grain in making 100 pounds of gain, or 41 per cent., in feeding a mixture of four-fifths Kaffir corn meal and one-fifth soy bean meal over feeding Kaffir corn meal alone. Five per cent. more of the mixture was eaten per day and the daily increase made by it was 48 per cent. greater and under most circumstances would be the most economical and desirable feed.

(With pigs 6 months old.)

For 100 pounds of gain it required 498 pounds of shelled corn, or 591 pounds of dry whole Kaffir corn, or 734 pounds of whole Kaffir corn that had been soaked forty-eight hours, or 596 pounds of Kaffir corn meal, or 506 pounds of a mixture of one-half Kaffir corn meal and one-half corn meal, or 423 pounds of a mixture of four-fifths Kaffir corn meal and one-fifth soy bean meal.

The shelled corn was worth 18½ per cent. more than the dry whole Kaffir corn. Forty-hundredths per cent. less of the Kaffir corn was eaten per day and the daily increase was 16 per cent. less than with the corn and a change of feed was necessary before the pigs could be fattened on the Kaffir corn.

There was a loss of 143 pounds of grain in making 100 pounds of gain, or 24 per cent., in soaking the whole Kaffir corn over feeding it dry. Five per cent. less of the soaked Kaffir corn was eaten per day and the daily increase was 24 per cent. less and the pigs utterly failed to fatten on the soaked Kaffir corn but

fattened when a change of feed was made.

There was a loss of 5 pounds of grain or .8 per cent. by grinding the Kaffir corn over feeding it dry and whole. Eighteen per cent. more of the Kaffir corn meal was eaten per day and the daily increase on it was 16.49 per cent. more and it was possible to fatten the pigs on it.

There was a saving of 90 pounds of grain in making 100 pounds of gain, or 18 per cent., in feeding a mixture of one-half Kaffir corn meal and one-half corn over corn meal alone. Four per cent. more of the mixture was eaten per day and the daily increase was 22 per cent. more rapid and would be by far the most economical feed of the two as a rule.

There was a saving of 83 pounds of grain in making 100 pounds of gain, or 20 per cent., in feeding a mixture of four-fifths Kaffir corn meal and one-fifth soy bean meal over feeding a mixture of one-half Kaffir corn meal and one-half corn meal. About the same amount daily of the mixtures were eaten but the daily increase made by the former was 21 per cent. greater. Under most circumstances the latter feed would be the most economical.

(With pigs 9½ weeks old, on alfalfa pasture.)

For 100 pounds of gain it required 427 pounds of corn meal, or 443 pounds of Kaffir corn meal, 322 pounds of a mixture of two-thirds corn meal and one-third soy bean meal, 319 pounds of a mixture of two-thirds Kaffir corn meal and one-third soy bean meal.

The corn meal produced 3.54 per cent. more pork than the Kaffir corn meal. Ten per cent. more of the Kaffir corn was eaten per day and the daily gain produced by it was 6.06 per cent. less.

There was a difference of 95 pounds or 28.61 per cent. in favor of feeding a mixture of two-thirds corn meal and one-third soy bean meal over feeding corn meal alone. The same amount of these feeds was eaten per day but the daily increase in weight made by the mixture was 28.78 per cent. greater and under most all cases the mixture would be the most desirable and economical.

There was a difference of 124 pounds or 38.86 per cent. in favor of feeding a mixture of two-thirds Kaffir corn meal and one-third soy bean meal alone. The same amount of the feeds was eaten per day and the daily gain was 40 per cent. greater but under a few circumstances might not be the most economical feed.

There was a difference of 13 pounds of grain or 4.07 per cent. in favor of feeding a mixture of Kaffir corn meal and soy beans. Ten and one-hundredth per cent. more of the Kaffir corn and soy bean mixture was eaten per day and the daily increase in gain made by it was 15.29 per cent. greater.

(With pigs 17½ weeks old.)

For 100 pounds of gain it required 437 pounds of corn meal, or 539 pounds of Kaffir corn meal, or 370 pounds of a mixture of two-thirds corn meal and one-third soy bean meal, or 372 pounds of a mixture of two-thirds Kaffir corn meal and one-third soy bean meal.

The corn meal was worth 11 per cent. more than the Kaffir corn meal. The same amounts of the feeds were eaten and the daily increase made by the corn was 11 per cent. greater but neither feeds were giving satisfactory gains.

There was a difference of 117 pounds or 32 per cent. in favor of feeding a mixture of two-thirds corn meal and one-third soy bean meal over feeding corn meal alone. Eleven per cent. more of the mixture was eaten per day and the daily gain produced by it was 46 per cent. greater and under most circumstances would be the most desirable and economical feed.

There was a difference of 167 pounds or 45 per cent. in favor of feeding a mixture of two-thirds Kaffir corn meal and one-third soy bean meal over feeding Kaffir corn meal alone. Twenty per cent. more of the mixture was eaten per day and the daily gains produced by it was 74 per cent. greater.

There was a difference of 2 pounds or .54 per cent. in favor of feeding a mixture of corn meal and soy bean meal over a mixture of Kaffir corn meal and soy bean meal. Eight per cent. more of the latter mixture was eaten per day and the daily increase produced by it was 7.47 per cent. more.

RESULTS OF OUR PREVIOUS TRIALS.

Winter 1894-5.—Pigs averaging 8½ months old but varying two months in age. For 100 pounds of gain it required 515 pounds of Kaffir corn meal or 439 pounds of corn meal or 18 per cent. less than the Kaffir corn. The two youngest pigs fed on Kaffir corn failed to make paying gains and also one of those fed on corn meal.

Winter 1895-6.—Pigs averaging 5½ months old. For 100 pounds of gain it required 650 pounds of Kaffir corn meal,

or 488 pounds of corn meal, or 351 pounds of a mixture of two-thirds Kaffir corn meal and one-third soy bean meal, or 324 pounds of a mixture of two-thirds corn meal and one-third soy bean meal. It required 36 per cent. less of the corn meal than the Kaffir corn meal. Both feeds utterly failed to fatten the respective lots, and after eleven weeks the feeds were changed.

A mixture of two-thirds Kaffir corn meal and one-third soy bean meal was 85 per cent. better than the Kaffir corn meal alone. The daily increase in gain was 69 per cent. better with the mixture.

A mixture of two-thirds corn meal and one-third soy bean meal was 50 per cent. better than the corn meal alone. The daily increase in gains was 52 per cent. greater with the mixture.

GENERAL SUMMARY.

Corn meal vs. Kaffir corn meal.—Fed under varying conditions the corn meal made the following showings over Kaffir corn meal: Four per cent., 11 per cent., 18 per cent., 36 per cent.

Shelled corn vs. Kaffir corn.—Fed under varying conditions the shelled corn made the following showing over the Kaffir corn: Eighteen per cent., 19 per cent.

Corn meal and soy beans vs. Kaffir corn meal and soy beans.—Fed under varying conditions the corn meal mixture made the following showings over the Kaffir corn mixtures: Four per cent., ½ per cent., 8 per cent.

Corn meal and soy beans vs. corn meal alone.—Fed under varying conditions the corn meal mixture made the following showings in its favor: Twenty-nine per cent., 32 per cent., 50 per cent.

Kaffir corn meal and soy beans vs. Kaffir corn meal.—Fed under varying conditions the Kaffir corn meal mixture made the following showings over the single feed: Twelve per cent., 39 per cent., 41 per cent., 45 per cent., 85 per cent.

Kaffir corn meal vs. one-half Kaffir corn meal and one-half corn meal.—Fed under varying conditions there were the following showings in favor of the mixture: Three per cent., 18 per cent.

With pigs 8½ months old, 100 pounds of Kaffir corn meal was worth 85 pounds of corn meal.

With pigs 7½ months old, 100 pounds of Kaffir corn meal was worth 115 pounds of dry whole Kaffir corn, or 135 pounds of soaked whole Kaffir corn, or 95 pounds of dry shelled corn, or 86 pounds of four-fifths Kaffir corn meal and one-fifth soy bean meal.

With pigs 6 months old, 100 pounds of Kaffir corn meal was equal to 99 pounds of dry whole Kaffir corn, or 123 pounds of whole soaked Kaffir corn, or 83 pounds of shelled corn, or 75 pounds of corn meal, or 50 pounds of a mixture of two-thirds corn meal and one-third soy bean meal, or 54 pounds of a mixture of two-thirds Kaffir corn meal and one-third soy bean meal.

With pigs 4 months old, 100 pounds of Kaffir corn meal was equal to 90 pounds of corn meal, or 68 pounds of a mixture of two-thirds corn meal and one-third soy bean meal, or 69 pounds of a mixture of two-thirds Kaffir corn meal and one-third soy bean meal.

With pigs 2 months old, and on alfalfa pasture, 100 pounds of Kaffir corn meal equals 96 pounds of corn meal, or 75 pounds of a mixture of two-thirds corn meal and one-third soy bean meal, or 72 pounds of a mixture of two-thirds Kaffir corn meal and one-third soy bean meal.

Farm Wagon for Only \$19.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only twenty-five inches high, fitted with twenty-four and thirty inch wheels with four inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Company, Quincy, Ill., who also will furnish metal wheels at low prices made any size and width to fit any axle.

Don't forget the excursion to Boston over the Nickel Plate road, September 16 to 18, inclusive, at rate of \$19 for the round trip. Good returning until September 30, 1898, inclusive. 60

Sheep Department.

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

Sheep Talk.

Many flockmasters are about to buy new rams for their use. In selecting the ram, an average-sized specimen should be chosen—that is, one that is not too large or too small, but a compact, blocky-built fellow, with a masculine head and neck. A yearling has always given me the best results, although I have just bought a two-year-old.

Last year I shipped my surplus stock to market on September 1, and printed the results in the Farmer. This year I sent seven four-year-olds, sixteen three-year-olds, three two-year-olds, one yearling, thirty-four lambs and one yearling ram to market, sixty-two in all, and there was room in the car for forty more easily. The sixty-two weighed when shipped, 6,100 pounds, and I paid 17 cents per hundredweight on 11,000 pounds, or \$18.70, with 25 cents deducted for bedding the car. At Kansas City the sheep were sold in three lots—the lambs, ram and the older sheep. The shrink was six and one-half pounds each. A heavy rain on the fleeces caused the market to fall one-fourth cent, so I did not get 6 cents for lambs, as I had hoped. Here is my bill: Twenty-seven sheep, 3,200 pounds, at \$4 per cwt., \$128; thirty-four lambs, 2,380 pounds, at \$5.75 per cwt., \$136.85; one ram, 130 pounds, at \$4.25 per cwt., \$5.52; freight, \$18.45; yardage, \$3.10; revenue stamps, 3 cents; commission, \$6; total, \$27.58. Net amount, \$242.79. Add to this \$30, that I got for two rams, and \$63.55 for the clip, and it makes \$336.34 net cash income from fifty-one ewes, one of which died, and I have left a superior flock in all respects, or about \$6.70 income from each ewe in the flock. This is almost \$1 a day for every day in the year, and will help to point out to others whether sheep will pay or not.

A friend of mine shipped forty-two head of Shropshire lambs that weighed sixty-seven pounds each, about two weeks ago, and got \$6 per hundredweight. When he returned he showed his bill to a stock buyer, and he thought he saw a soft snap, so he went out, and, as all lambs looked alike to him, he got a load of long-wools and common lambs at \$4 per hundred, and thought he was sure of \$1.50 per cwt. clear, but he only got \$4 per cwt. in the market, and was out the freight, and he now sees the difference between a Shropshire and some other kinds.

I had the good fortune to visit the home of H. M. Kirkpatrick, at Connors, Kas., where I was royally entertained. I found his ewes, like every one's else, suffering from too much green grass, on account of the abundant rains. I had the pick of forty rams, and my first three choices fell on the very three he had reserved for his own use, which goes to show that our ideas run along the same lines. His rams are all good ones, and what is best of all, have not been fed, are not at all fat, but are in just the proper condition for breeders. I would advise those needing rams to go and see these rams for themselves, and if you do not buy a ram, a trip to the farm and a sight of those Hadley Jr. hogs, so ably pointed out by that successful show man, Mr. Gresham, are well worth the \$1 that takes you out and back from and to the stock yards at Kansas City.

Fatal Disease Among Sheep.

The Denver Stockman says Dr. Gresswell, the State Veterinarian of Colorado, has received a letter from Walsenburg, telling of a serious menace to the sheep of Huerfano county. The letter and Dr. Gresswell's reply are as follows:

Walsenburg, Colo., July 11.—Hon. C. Gresswell, State Veterinary Surgeon, Denver, Colo.—Dear Sir: I beg leave to notify you that the sheep of my neighbor, Thomas Lamb, St. Mary's P. O., Huerfano county, are infested with what the doctor terms "hydatids." Animals are dying in numbers and Mr. Lamb would be very grateful to you if you would aid him to prescribe for the animals. Yours respectfully,

AUGUST UNFUG.

Denver, Col., July 13.—Messrs. Unfug Bros., Walsenburg, Col.—Dear Sir: I reply to yours of July 11, the disease of "hydatids" is parasitic, and consists in the formations of cysts in various parts of the body, due to the development of a tapeworm, which infects dogs and coyotes.

There is no cure whatever for the "hydatid." The only thing to be done is to prevent as far as possible the deposit of the egg of the tapeworm from the dog on to the sheep pastures, and with this object all dogs around sheep infected



Fishing for Health.

When a man breaks down with that dread disease, consumption, and recognizes his condition, he starts out to fish for health. He tries this thing and that thing. He consults this doctor and that doctor. He indulges in all kinds of absurd athletic exercises. He tries first one climate and then another. He tries the rest cure and the work cure. He grows steadily worse.

That is the story of most consumptives. Finally, when the consumptive dies, the doctor shrugs his shoulders and pronounces consumption incurable. A thirty years' test of Dr. Pierce's Golden Medical Discovery has demonstrated that it cures 98 per cent. of all cases of consumption, if taken in the earlier stages of the disease, before the lungs are too far wasted. In a consumptive there is a weaker spot than even the lungs. That spot is the stomach. A consumptive never really begins to die until his stomach gives out. The "Golden Medical Discovery" not only braces up the stomach, but acts directly on the lungs, healing them and driving out all impurities. Honest medicine dealers will not urge you to take an inferior substitute.

"I had a very bad cough, also night-sweats, and was almost in my grave with consumption," writes Mrs. Clara A. McIntyre, Box 171, Ashland, Middlesex Co., Mass. "A friend of mine who had died with consumption came to me in a dream and told me to take Dr. Pierce's Golden Medical Discovery, and, thank the Lord, I did so. By the time I had taken half of the first bottle I felt much better. I kept on until I had taken three bottles. That was all I needed. I got well and strong again."

Whenever constipation is one of the complicating causes of disease, the most perfect remedy is Dr. Pierce's Pleasant Pellets, which are always effective, yet absolutely mild and harmless. There never was any remedy invented which can take their place. They never gripe.

with tapeworm should either be cured or shot. In England, where dogs are used very much for handling sheep, this disease is very common, and I have known 600 sheep to die out of a herd of 1,000. In those countries (England and Scotland), it is customary to dose shepherd dogs with tapeworm medicines, so as to prevent the disease among the sheep. One tapeworm in a dog will distribute millions of eggs per day on a pasture, and in warm wet weather these eggs will readily hatch into the embryonic tapeworm, which causes the hydatid cyst in sheep, when it migrates from the stomach of the sheep into the internal organs of this animal.

In the case of your neighbor it is quite possible that the outbreak may be caused by one single dog which has one of these tapeworms, and such a dog may be capable of spreading the disease for an indefinite period. I should advise that a very careful watch be kept of any dogs used in handling this herd, and if any segments of tapeworm appear in the excretion of any dog, you should have him shot (as the safest plan), or cured of the tapeworm, as outlined below. A complete cure is always uncertain.

Another point to be guarded against is also important: Every hydatid eaten raw by a dog will in the stomach or intestines soon be developed into the mature tapeworm, and so cause any other dog to be a fresh focus of infection, and so on ad infinitum. Therefore all carcasses having hydatids in them should be kept very carefully away from dogs or coyotes. These hydatids will not, as far as we know, develop into the mature worm in any other animal but canines, such as dogs, wolves, coyotes, etc.

Each tapeworm (and there are many varieties) has its special method of propagation, and all have to be matured in at least two different animals. Hydatids develop in the ruminants and canines. The two common tapeworms of mankind pass their life one in the ox and man and the other in swine and man, etc.

A fairly safe cure for tapeworm in a full-sized shepherd dog is: Keep fasting twenty-four hours; then give—Fluid extract of areca nut, 1 drachm; fluid extract of male fern, 20 drops; subnitrate of bismuth, 1 drachm; glycerine in which has been dissolved 5 drops of chloroform, 1 drachm.

After giving this medicine keep dog in cool dark place for twenty-four hours. The following morning after giving above medicine, give one ounce of castor oil. Watch for the expulsion of the worm, and keep in closed place until this takes place for certain.

This course can be repeated in ten days with safety. The treatment is severe, but effectual unless, as often happens, the dog vomits the medicine before it

has time to act. It is a very good plan very soon after giving the medicine to let the dog have some fresh raw meat. The hunger after the twenty-four hours' fast will enable the dog to retain the meat on the top of the medicine.

Destruction of the hydatids, or preventing them from being eaten by dogs or coyotes, is most important, especially by the latter, as they cannot be handled.

Yours truly,
CHAS. GRESSWELL.

AMONG THE BREEDERS.

During the past few weeks a member of the Kansas Farmer staff has visited a number of representative breeding farms of improved stock in Kansas, and under the above heading gives his observations of what he saw.

The improvement of our domestic animals is one of the important achievements of advanced agriculture, and as every farmer in Kansas is more or less financially interested in stock-growing, the accomplishments of our improved stock breeders have a significant interest to all. The vocation of the breeder of pure-bred stock is indeed a grand one, as he is the advanced farmer who experiments with and develops the various

Chief Tecumseh and others from the herd of Lawrence Nation, of Hutchinson. There will be forty-five pigs, the produce of the foregoing animals, for private sale. Those desiring some good quality pigs are cordially invited to call or write their wants to Mr. Symms, who will make prices satisfactory to purchasers.

SHANNON HILL SHORT-HORNS.

The Shannon Hill herd of Short-horn cattle, owned by Hon. G. W. Glick & Son, of Atchison, is one of the largest and most celebrated herds of the breed in Kansas, and is very properly entitled to the claim of the leading Bates herd of the West. The Shannon Hill herd is rich in the best Short-horn blood of England and America and includes mainly the fashionably-bred families of Duchesses, Kirklevingtons, Wild Eyes, Waterloos, Filberts, Darlington, Lady Janes, Gwynnes, Princess and Sanspareils. The present bulls in service are Airdrie Duke of Atchison 126412 and Waterloo Duke of Atchison 127452. There are a number of animals in the herd sired by the Grand Duke of North Oaks 11th 115735 and Winsome Duke and other celebrated herd sires. The herd now numbers about 150 head, calves included, and is remarkable for the general uni-

SUNRISE STOCK FARM.

The Sunrise stock farm is located at Hope, Dickinson county, Kansas, and is owned by C. A. Stannard. This breeding establishment makes a specialty of Hereford cattle and Berkshire swine. It is the largest establishment in the State for pure-bred Berkshires and is only second to Sunny Slope farm for Herefords. During the past year, from September 1, 1897, to the present date, the proprietor, Mr. Stannard, has sold at private sale pure-bred Herefords amounting to the snug sum of \$75,000, probably the largest sales ever made in one year in private sales of Herefords by any breeder in America.

The present herd numbers about 300 head of representative animals of this great breed, and the bulls in service now are Kodac of Rockland 4731, sired by Sylvester 11123, and is an Anxiety-Wilton bred bull. Another herd bull is Java 64045 by Hengler 37003 by Saracene, one of Vannata's famous show bulls, and is a full brother to Jack, the champion of the American Fat Stock show.

Mr. Stannard has now ready for sale over 100 head, consisting of fifty head of each sex of serviceable age. Intending purchasers of Herefords should not fail to visit Sunrise stock farm.

Shoe Box Butter,



the kind that is graded in the market as "ladies" and "grease," is the result of the old style milk-pan dairying. "Select dairies" or "choice creamery" are the brands that bring money.

SHARPLES DAIRY SEPARATORS

make that kind of butter and make 25 to 40 per cent more of it from the same cows. Further facts free.

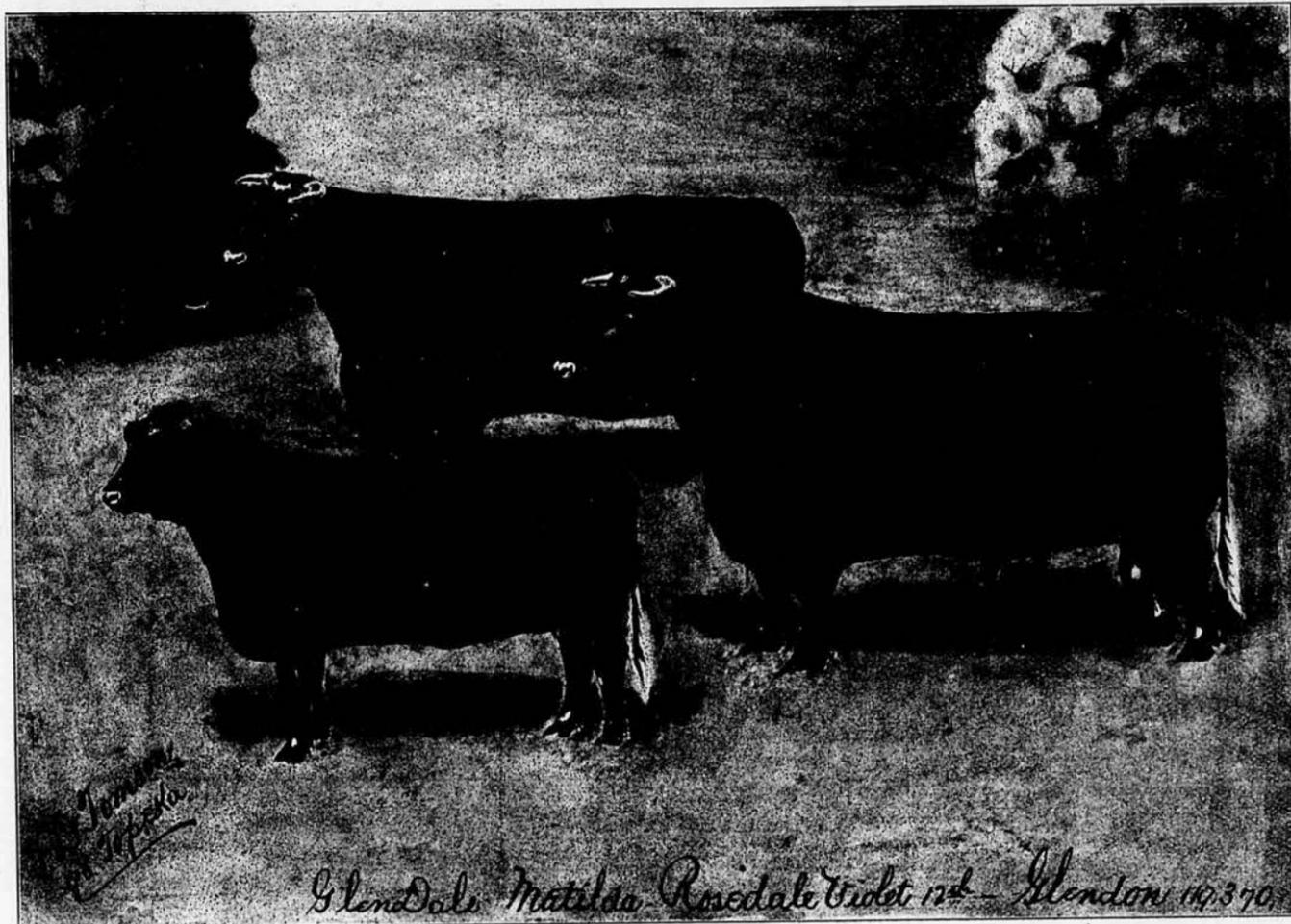
BRANCHES:

Elgin, Ill.
Omaha, Neb.
Dubuque, Iowa.

P. M. SHARPLES,

West Chester, Pa.

assistance of Mr. Charles Preece, one of the most competent and skillful herds-men in the country. He has for twenty-five years past been continually employed in caring for thoroughbred hogs and cattle, working for some of the largest and most successful breeders in the United States and England. I mention these matters that you may appreciate



We present this week a group from the Glendale herd of Short-horns, owned by C. F. Wolf & Son, Ottawa, Kas. It represents the Cruickshank bull, Glendon 119370,

which stands at the head of the herd, one of his get, Glendale Matilda, and Rosedale Violet 12th by Imp. Thistle Top 83876, and claiming for her great-granddam the Imp.

Marsh Violet. The trio is included in the show herd which will be exhibited at the Franklin county and other fairs this fall.

classes of stock, so that the general farmer may thereby realize more profits in the rearing, feeding and marketing of his stock. The breeder of pure-bred stock has, by his successful work with improved stock, made it possible to mature and market cattle, hogs, sheep and poultry at one-half the age and with vastly less cost of feed and time than under the old regime. With the horse he has improved his speed, size, style and conformation until he meets the requirements of mankind as never before. Let us take off our hats to the breeder of improved stock. Let us encourage him in his noble work by patronizing him whenever possible so to do.

THE WILKES QUALITY POLAND-CHINAS.

Among the new herds of Poland-Chinas established in Kansas is the above-named herd, owned by Tom Symms, of Hutchinson. The foundation stock of this herd is mainly from Nation's herd of Poland-Chinas and the Quality herd, formerly owned by W. E. Gresham. The herd boar is a promising son of old Darkness Quality, out of a U. S. dam. The young boar is Guy Wilkes by Guy's Unfortunate, out of Bessie Oxford Wilkes, a line-bred grandson of Guy Wilkes. Among the brood sows are Beauty Seldom, Bessie Wilkes, Chief I Know, Standard Wilkes, Ideal Black U. S. and

formity and size of the animals. If any Short-horn breeder has a prejudice against the Bates tribe a visit to Shannon Hill stock farm will correct any erroneous or preconceived notions detrimental to this strain. [While Gov. Glick has always been strenuous as to pedigree, he has also been equally insistent as to the individual excellence of the animal, consequently the usual objection urged against the Bates cattle does not obtain in this herd. The writer never saw a grander lot of large, useful cows than the older dams in the herd. Another splendid quality of the cows, in addition to their size and beefy conformation, is their milking quality, a combination rare in leading herds of beef cattle. Shannon Hill herd has always enjoyed a splendid patronage, owing to the fact that only reasonable prices are ever asked. Any of the produce which can be spared is priced so that any breeder or farmer can afford to buy. Fred Glick, the Governor's son, is now in active charge of the herd, and having been bred to the business is sure to make a success in keeping the herd in the front rank. Visitors are always welcome, whether they wish to buy or not, and a day spent with the Governor and Fred well repays the visitor, and he leaves with the conviction that Short-horns are all right and ever will be.

In the Berkshire division of this establishment the record of the American Berkshire Record shows that in 1897 the sales of Berkshires from this herd were larger than the sales made by any Berkshire breeder in Kansas. The herd boar is Longfellow Best 44626 by Reformation Duke 28685 out of Miss Duchess by King Lee; his dam is Silver Tips XX 31138 by Longfellow. This herd sire is royally bred on both sides. He is one of the largest hogs in the State and yet is a smooth and stylish animal. He is assisted by that old premier, Longfellow W., also Lord Barrington 24449, Longfellow Jr. 47011 and Prince Broadback 42837.

Mr. Stannard, in his report to the Secretary of the American Berkshire Association, says: "I have in my herd of Berkshires at this time 356 head of hogs, and have never had as fine a lot of pigs as this spring—large litters of growthy, thrifty and healthy pigs. Every pig before turned out of the pen it was farrowed in is marked with a tag in both ears, so there is absolutely no chance for errors in my breeding record. The breeding of thoroughbred Berkshire hogs and Hereford cattle is the only business I am engaged in and it has my entire time and attention. My breeding books are as carefully kept and accurately posted as any set of bank books. I have the able

ciate the fact that we are conducting a large breeding establishment on business principles, and do not send out anything but what we absolutely know the breeding of, nor do I ship an inferior animal to any one. I put into the feed lot all that I do not consider good ones. In all my experience as a breeder of thoroughbred hogs and cattle I have yet to receive the first letter censuring me for sending out on order a pig or calf that was not as represented and not satisfactory.

"I have in service at this time eight of the best boars I could find for sale in the country from the leading herds in Kansas, Missouri and Ohio, and am prepared to supply all my old customers with new blood and as good as they can buy anywhere."

Through Cars to Cincinnati.

Pullman palace and tourist sleepers and free chair cars to Cincinnati without change, via Santa Fe Route, on September 5, 1898. Round trip tickets cost only \$16.10.

The ladies of the G. A. R. have arranged for through train to Cincinnati via Santa Fe on September 5. The round trip is \$16.10. An excellent opportunity to give your family an outing.

The Home Circle.

THE LOST BOY.

BY PHOEBE PARMALEE.

A dear little boy has wandered away.
He was right by my side—it seems but a day—
But a few weeks ago, I rocked him to sleep.
Watching the lids o'er his sleepy eyes creep,
Smoothing the damp curls off from his brow,
And loving him so! only mothers know how.
He started to school so proud in his looks,
Swinging his dinner-pail, tossing his books,
Shouting a challenge to this or that mate,
Slamming the door and swinging the gate.
And that was but yesterday; did he come back
When school hours were over, ere night settled black?
Has any one seen my small laughing boy?
Such a bright, mirthful youngster, no one could decoy.
I look from my window with sight growing dim,
Wishing and longing for blest sight of him;
Instead, through a doorway a tall young man stands;
He is carrying a razor and mug in his hands.
A glance at his face and you know reasons why;
They're not the old dirt-marks which once met my eye.
A deep basso voice now startles my ear:
"Have I a stiffly starched shirt, mother dear?
The one I wore last is as limp as a sheet—
I played baseball in it (and then we got beat!)"
I withdraw my thoughts from the stretch of the past,
And know I have found my own boy at last
Right here by my side, as familiar and kind,
But more thoughtful, perhaps, than the child in my mind.
And I know without asking some other home
Will be graced by his presence when evening shall come.
Some other love must have tempted my boy
Than the love he years ago used to employ
To rock him to sleep, to soothe all his woes.
"Twill be the same in years to come, I suppose—
As he now is my baby, the middle-aged man
Will appeal just as much to the love which began
In the far-away cradle and ends in the grave—
That love which none truer than mothers e'er gave.
Rock Creek, Kas., August 20, 1898.

SOLDIER AND SURGEON.

By Dr. Henry W. Roby, Topeka, Kas.

Historians tell us that the art of surgery is coeval with the human race, and that man had not been on the planet a generation before he found the need of the "wound dresser." In his first encounter with a wild beast he was probably worsted, and so badly, too, that he had to be carried off the field of encounter and his wounds cared for. That was primitive surgery. And from that time to this the ceaseless contentions of men with wild beasts and with families and tribes and clans and nations has produced a never-ending necessity for surgical aid. When clubs and stones were the weapons, bruises and broken bones were the surgeon's care. When spears and bows and arrows were invented, arrow-heads were to be extracted and spear wounds closed. And when gunpowder was invented and the arquebuse became the formidable weapon of assault and defense, bullet wounds made a new call on the skill of the surgeon. And when, in 1346, field guns were first used in the great battle of Cressy, a new danger arose and a new demand was made on the profession. Then came explosive bullets and bursting shells and torpedoes and dynamite guns and the nitro-gelatine bombs, all increasing the call for skill and ingenuity on the part of the surgeon. The history of the world is the history of blood and carnage. In all the great and small battles of the world the surgeon has played as important a part as the soldier. Homer tells us that—

"The wise physician skilled our wounds to heal
Is more than armies to the public weal."

The business of a soldier is to capture, to maim, to kill. All the complex and vast enginery of war is designed to cripple and destroy men. Every fortification would be easily assailable were it not for the men in defense of it. Assaultants and assailed all do their utmost to cripple and kill their antagonists in battle. And when the rifles begin to crack along the lines, then the scalpels begin to drip with blood. The battle that rages for the destruction of life finds its counterpart in the battle that rages to save life.

And if the army needs able and skilled commanders and faithful and trained soldiers to conduct the battle, how much more does it need able, experienced, brave and trained surgeons to save the maimed contingent? After a battle, the unskilled, inexperienced surgeon is the best ally the enemy can have. He can easily manage to lose more wounded soldiers in a few days than the enemy can possibly kill during the battle. In

all wars far more men are wounded than are killed on either side, probably 4 to 1. Then comes the call, not only for surgeons, but for great surgeons, for surgeons with the greatest amount of experience and skill. The tyro, the young doctor who has never set a broken bone, nor amputated a finger, nor tied an artery, nor prescribed for a case of profound shock, nor extracted a bullet from a rent skull, is of as little account in such a great emergency as would be a Corporal to command the army. Each one could make his best stagger at the business before him, but God pity the assaulting lines and the crippled contingent!

In our war with Spain, at the end of the nineteenth century, when surgery as a science was proclaimed to be almost up to our dream of perfection, very great things were expected of it. Its readiness and ability to cope with all conditions was loudly proclaimed. It had practically issued its proclamation of infallibility, and the world believed it, and men who enlisted or took commission in the United States army thought they had an almost invincible ally which they could depend on implicitly for succor if wounded. The volunteer camps all over the country—at Tampa, Chickamauga, San Francisco and elsewhere—soon learned that the boast of medical perfection was a myth. Sickness raged and raged like the great forest fires of the pneries, and death claimed more victims in camp than in battle. Then came the great battle of Santiago, and while the military element of our army claimed a great victory, the medical department suffered such a crushing, stunning, irreparable defeat as has never before been recorded in the history of war. A great battle was deliberately planned, a great army was landed, almost unconquerable defenses were assailed and thousands were killed and wounded. And when the army of surgeons that should have been in reserve and waiting with great cargoes of medical, surgical and hospital supplies and appliances for meeting the imperative demands of the hour were called for, they could not be found. They had not arrived. A few surgeons with a few instruments and a few more without were landed. Nearly all hospital supplies that had been sent with the expedition were afloat miles away in the Caribbean sea and could not be landed. Wounded men by the hundred lay along the battle line for many hours with only such help as their comrades in arms could give them. Others were carried somewhat to the rear and remained long in the same horrible condition of helplessness for criminally long periods of time. And the few surgeons on hand were worked to utter exhaustion in their heroic efforts to help the wounded. And when this infamous blunder of unpreparedness began to hammer with an iron hand at the doors of the War department, then, what are called contract surgeons were called in and sent to the front to do what an army of skilled surgeons should have been on hand and waiting to do the morning the battle was ordered. It is doubtful if any army on earth ever went into a deliberately planned offensive engagement so utterly unprepared to take care of its wounded. In all the history of great military operations and commands, from Joshua to Shafter, there never was such a blaze of hot and indignant criticism of the medical corps as is now floating over the country, on every plain and hill-top, in all the great newspapers and in the countless letters sent home, as is now going on over the colossal failure of the medical department of the United States army at Santiago. Domestic and foreign papers and correspondents devote appalling amounts of space to the denunciation of the blunder. And where does the blame lie? It is at last announced that a commission is to be appointed to find out. But too late, alas, to save many a gallant soldier who lost his life, not by Spanish bullets, but by American stupidity and inefficiency.

When Dewey captured 1,400 islands and 9,000,000 of people and only needed three or four surgeons to follow up with the care of the wounded, some fatal nightmare seems to have settled over the War department and left it in the belief that the same miracle would be seen at Santiago.

The Surgeon General of the United States army has been posing before the country for years as a yellow fever expert. The government has for years been paying him and some of his assistants large salaries and heavy contingent funds to investigate and master the subject of yellow fever, and yet, in the very first move of the army, the troops were set down in one of the worst yellow fever nests on the planet without any protection against its ravages, and



Healthfulness

of the bath depends largely on cleanliness of the bath tub. Court health and shun sickness by using

GOLD DUST WASHING POWDER

for all household cleansing purposes.

Largest package—greatest economy.

Sold everywhere. Made only by

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

a whole army infected and thousands of them made victims of the yellow scourge. Where lies the blame? A commission may sometime investigate and file its delayed report in some old pigeon-hole in the War department for archaeologists to dig out when Washington is turned up to the light a thousand years hence, as old Herculeum was.

But the fault is not all with the War department nor with the Surgeon General's office, though God knows they bear enough of it. The Governors of forty-five great and small States bear an important share of the blame, especially for the vast amount of sickness and mortality in the pestilence-infested camps of the volunteers.

On what grounds should men be chosen for military surgeons? The universal answer of the masses is and must be, "On the score of medical, surgical and sanitary skill." But what is the mournful fact? It is that, without scarcely a solitary exception, the surgeons (God save the mark) for the volunteers were chosen solely on political grounds. In Kansas not one man who is entitled to the honorable name of surgeon was placed in charge of the troops sent out. Not one of them had ever been known or thought of in the medical societies of the State as surgeons. Probably not one of them was ever called in council in an important surgical case in his life. A majority of them never did anything in surgery beyond what is known as minor surgery, and very little of that. The very first appointment announced for the Kansas volunteers was of a country doctor who probably never saw a medical college and who, I am told by some of his neighbors, never so much as amputated a little finger. Every man in the State who, at the call for troops, had any reputation in the State and local medical societies as a surgeon is still in the State "doing business at the old stand" and in citizen's apparel. Not one of them is wearing the uniform of the United States. Those uniforms are all on men who are not now and never have been known as surgeons, except by the grace of their military titles, "surgeons," or "assistant surgeons." Not one of them was ever known as a fever expert or a master of sanitary science. None of them were ever known to the profession as expert prescribers or adepts in therapeutics. But, alas, all were and are experts and adepts in the field of "practical politics." And the poor victims of the battle field and fever camps pay the fearful penalty. I could fill every line of the Kansas Farmer for the next month with the indictments and anathemas that are being hurled by an indignant public at this rotten and gangrened department of the United States army.

Cake Recipes.

Orange Cake.—One cup milk, two-thirds cup butter, one and one-half cups sugar, three cups flour, two eggs, one teaspoonful cream tartar, one-half teaspoonful (or corresponding quantities) baking powder, grated rind of one Valencia or Messina orange. Frosting.—Extract the juice of one orange, and fill with frosting sugar. Spread and set in cool place. Layer cake may be made from this rule, the frosting being used for filling.

Sponge Cake.—There are sponge cakes and sponge cakes; here is the "Eureka" rule: One and one-half cups of sugar, one-half cup of cold water, three eggs, pinch of salt, heaping teaspoon baking powder, two cups flour, and extract of lemon to taste. In mixing put sugar in large earthen bowl, pour the water over and let dissolve. Beat yolks of

eggs to yellow foam, and add to sugar and water. Add baking powder with sifted flour, and stir to smooth batter, then the whites of eggs beaten to stiff froth, and flavoring. Pour into cake pan lined with buttered paper. Forty minutes is required for baking, as this makes a large loaf.

Economical Cake.—One good cupful granulated sugar, one heaping teaspoon butter worked in, one egg, one cup sweet milk, one teaspoon cream tartar, one-half teaspoon soda. Stir quite stiff with flour. Bake in three layers. Filling.—Heat one pint milk; stir in yolk of one egg beaten with small cupful of sugar and a spoonful of good flour. Let boil. Flavor, and spread while warm. The white of the filling eggs beat to a froth with a little sugar for icing.

For forty-one years Bismarck flourished in journalistic caricature, and there is no doubt but that it was this aggressive caricature that was the initial element of publicity that presented to the world at large his character as a statesman, with all his faults and some of his great qualities exaggerated.



BISMARCK'S FAREWELL TO THE PRESS.
(From "Bismarck in Caricature.")

The first notice by the comic papers enjoyed by Bismarck occurred away back in 1849, but it was not until 1863 that the small cut showing Bismarck with his left hand raised and his first finger and thumb extended appeared—a rather insignificant sketch, but one now famous, for the reason that it was the first to bring the three hairs into prominence, and make them characteristic of the man. From that time the three hairs have been associated with his caricatures, says Henry W. Fischer, in "Bismarck in Caricature," in Harper's Weekly for August 13, and his retirement from public life in 1890, was shown by an affecting cartoon, where the great ex-Chancellor, grip-sack in hand, and his famous dog at his side, is about to say farewell to the public press forever. He hesitates at the doorway, and returns to the comic editor the three hairs, saying that, as he has no further use for them, the cartoonist had better keep them for a memento.

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, SOFTENS THE GUMS, ALLAYS ALL PAIN; CURES WIND COLIC, and is the best remedy for DIARRHEA. Sold by Druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

The Woman Who Spends a Penny

for a postal card, or by letter requests us to send her **Our Cloak and Suit Catalogue** for Fall and Winter 1898-99, will receive a copy free. The catalogue is beautifully illustrated, shows the latest styles in Cloaks, Capes and Suits, and quotes **Wholesale Prices to Everybody.** No catalogue sent to residents of Chicago. Originators of the Catalogue Business, **Montgomery Ward & Co., CHICAGO.**

The Young Folks.

A SMALL BOY'S MORNING.

First I thought I'd dig a well,
And so I took my spade,
And underneath the apple tree
A deep round hole I made.
But though I worked like anything
Till I was stiff and lame,
I found I couldn't have a well
Because no water came.

Then I spied a little bird;
It lay there just as dead!
And so, without another word,
I dug a grave instead.
I put poor birdie in a box,
And hid it in the ground,
And heaped the dirt above it close
And planted flowers round.

Bird funerals are lots of fun—
Of course, they're very sad!
When I had covered up the bird
An appetite I had.
I ate a plate of gingerbread,
Some bread and butter, too,
And then I hurried out to find
Some other things to do.
—Harper's Young People.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 36.

BISMARCK.

Every nation in the world seems to have one name of a hero or statesman to take the precedence of all other names on the roll of honor. For the past twenty-seven years the name of Germany's greatest man has been Bismarck.

Returning from Copenhagen on July 27, I passed the castle of Friedrichsruhe, which is about sixteen miles southeast of the city of Hamburg, and would much have liked to stop and see the "Iron Chancellor." But the strong man was wrestling with the mightiest opponent he had ever met—one who has never yet been vanquished, and the iron man was even then surrendering. No visitors were allowed to enter the castle and I had to be content with a view of it among the beautiful forest trees which surround the unpretentious building. The park is indeed very beautiful, but the castle is not.

A few days later the "German Fatherland" was in mourning for its hero, who died on Sunday, July 31, and all official flags throughout the country were at "half mast" until after the funeral.

It was not until Monday morning that the city of Berlin became aware of the death, and during the forenoon it seemed as though every house in the big city was decorated with one or many flags draped in mourning.

The history of the great man has been told in every paper throughout the civilized world, and my object in this letter is to tell only of the public funeral ceremonies in the city of Berlin.

BISMARCK'S FUNERAL.

It was announced on Monday that the official funeral services would be held on Thursday, August 4, in all the churches of Berlin; but of course public interest centered around the church where the Emperor and royalty generally would attend.

On Thursday morning at 8 o'clock the chimes of the "Kaiser Wilhelm Gedächtnis Kirche," on Augusta Platz, Kurfürstendamm, began to ring, and sounded every half hour until 10 o'clock.

At 9:30 a. m. myself, my mother and my sister were at the church and found the streets in the vicinity packed with a multitude of people who wanted to see the royal procession when it should arrive. The church is very large, but it could not have furnished room for a tenth of the people assembled. Only those were allowed to enter who had proper credentials, and we just happened to be among the fortunate ones and were able to obtain seats where we had a fine view of the whole interior. A large force of police guarded the main entrance to the church, and guards were stationed at every door.

A large detachment of foot soldiers kept an open pathway for a long distance from the church along which the Emperor and his retinue were expected to come. A drum corps was stationed at the head of the column of soldiers whose office was to announce the approach of royalty by tattoo.

Shortly after we entered there arrived the officials of the Reichstag, the Bundesrath, and the various diplomatic corps. To the right and front of the altar sat Prince Hohenlohe-Schillingsfuerst, the Chancellor of the empire, and the chiefs of the various departments of the national government. To the right of these were stationed Oberbürgermeister Zelle and the high officers of the Berlin city government. To the left of these were seats reserved for wives of the high officials just named, and behind these the "Knights of the Black Eagle." Then came the diplomatic officers of the

various governments represented in Berlin, stationed according to the rank of the nations. The United States was well up in front—several pews in front of Spain and touching elbows with Britannia's representative.

As we entered the church we were given a nicely-printed program of the exercises, the front page of which informed us as follows:

TRAUERFEIER
in der
Kaiser Wilhelm Gedächtnis Kirche
für
Seine in Gott ruhende Durchlaucht
den
FUERSTEN OTTO VON BISMARCK,
Herzog von Lauenburg
am
4 August 1898.

Shortly before 10 o'clock the members of lesser royalty appeared under the guidance of "Obersthofmarschalls" the Count Eulenberg. There were Princes Frederick Leopold and Friedrich Wilhelm of Prussia, Prince Max of Baden and the hereditary Prince von Hohenzollern, then the Princess Frederick Leopold and Princess Henry of Prussia, whose husband is the naval commander in Asiatic waters, taking nautical lessons near Philipina's dewy shores. Then came Prince Albert of Schleswig-Holstein and the hereditary Prince Hohenlohe-Oehringen.

A few minutes later the regimental music (the drum corps) announced that the Kaiser was coming from the Charlottenburg station.

Our position was fortunate for us, as we could look out of the window and see the procession as it arrived. Simultaneous with the rattle of the drums the beautiful chimes in the main tower again pealed forth for the last time before the services and not again to be rung until another royal occasion shall require—to announce a birth, a marriage or a death in the royal family.

First came the first company of guards—the personal guard of the Emperor—their white uniforms and bright steel waistcoats and helmets shining in the sun like burnished silver, then came a few outriders, then a pretty victoria drawn by four black horses, one coachman and one footman on the box and one behind. We knew it was the Kaiser's carriage because the coachman and footmen wore the large white feathers in their hats, which distinguished them from ordinary coachmen of common people like Dukes and Counts and no-account folks.

The Kaiser wore the scarlet uniform of the First Guards regiment, which seemed to be nearly covered with medals and royal stars. The Kaiserin was in deep mourning with a small black toque and very large diamond ear-rings, which were her only ornaments. Both bowed very profusely on all sides in answer to the salutes of the people. Behind them came the rest of the royal family, including the little Princess Victoria—named after her great-grandma. The Kaiser and royal party were the last ones to enter the church. When the tattoo announced the coming of the Emperor the audience arose facing the center aisle, and remained standing until the royal party were seated. First came several general officers in brilliant uniforms, then the Kaiser, and every one bowed very low, then the Kaiserin, and again the people bowed.

During the entree of the Kaiser the beautiful echo organ, in the hand of Professor Reiman—the royal organist—pealed forth the exquisite melodies of Beethoven's funeral march—"Auf den Tod eines Helden."

The Kaiser's box is on the left of the altar, but he had reserved it for the Bismarck family. There seemed to be no royal courtesy left undone by the Kaiser, but the family of the dead Prince were conspicuous by their absence. The royal pew was left empty. The Kaiser and Kaiserin sat in large chairs right in front of the altar, and on either side were five smaller chairs for other members of the royal family.

As soon as the royal party were seated the choir, over one hundred voices, sang the opening choral, and then followed the responsive exercises arranged for the occasion, a part of which is as follows:

Choir: "Ich weiss, das mein Erlöser lebt." (I know that my Redeemer liveth.)

Leader: "Selig sind die Toten, die in dem Herrn Sterben von nun an." (Blessed are the dead which die in the Lord from henceforth forever.)

The congregation joined in singing, "Was Gott thut, das ist wolgethan."
Then the choir chanted the 90th Psalm.

The congregation joined in singing: "Jesus lebt, mit ihm auch ich." (Jesus lives, with him I also.)

The minister sat at the left of the altar and the services were under the direction of Dryander, the Crown

Prince's professor. The sermon was by Court Preacher Faber, and was founded on the 149th Psalm.

After the benediction the organ sounded a beautiful march, and though I had heard the echo organ before, the music sounded to me the finest I ever heard.

The congregation arose, facing the center, to pay respects to the Kaiser, who came slowly down the aisle, occasionally speaking to some one he was especially pleased to see; and when he reached the pew where we were he stopped and "shook hands" with a military officer who was the fourth person on our right, but it gave us a fine opportunity to get a good view of him and the famous mustache with heavenly aspirations. The Kaiser is a handsome man, and if he is proud he has a right to be. He looked very gay and buoyant.

After the royal party had left the church the officials and diplomats, in about the order mentioned at first, made their exit.

While waiting, I noticed a couple of dark-complexioned gentlemen in bright uniforms in front of me. They paid especial attention to the United States flag and eagle pin I wore. I saw from their slight motions that they were talking about me. I afterward learned they were the Spanish Minister and Secretary of Legation, and it was the American eagle and flag which they were talking about; but they did not seem to be displeased with it.

All the Ambassadors and Ministers were in military uniforms, except Ambassador White and the Ambassador of the French Republic, who wore evening dress suits, and the French Ambassador had a broad band of light blue ribbon across his breast. The Austrian Ambassador was dressed in a very light blue suit, white braid, and with a queer-looking pocket hanging from the sword hilt, on which was embroidered "F. J. R." (the initials of Francis Joseph, Rex).

It would take too much space to describe all the uniforms, but none of the Ambassadors or Ministers had the intelligence of face or bearing which characterized America's representative, the Hon. Andrew D. White. He wore neither medal nor uniform, but he fittingly represented the greatest nation on earth.

Before the battles at Manila and Santiago many foreign naval experts thought that from the lack of homogeneous nationality among the enlisted men in our navy there would be missing, when a fight came, that spirit of unanimity—"team-work" they call it on the football field—which is so essential to true courage and victory. That they were mistaken is clear, for the striking feature of the battles has been the cour-

FRUIT LANDS IN TEXAS

20,000 acres of the most desirable land in Texas. Located in De Witt and Victoria Counties. Especially adapted to Corn, Cotton, Havana Tobacco, Fruit and Vegetables, as well as Stock Raising. High, healthy, free from malaria. Abundance of pure water. Refreshing gulf breezes. Sold in tracts to suit, at moderate price and on easy terms. Don't freeze and suffer another winter. Come to Salubrious Texas, take comfort and acquire wealth.

Full description and details free.

ADDRESS: E. H. FORDTRAK, THOMASTON, DE WITT CO. TEXAS.

age and fearlessness of the men under fire. This is well shown by the way in which nearly all of the men of Sampson's fleet volunteered to go on the Merrimac with Hobson to almost certain death. Constantly recurring victories has naturally brought about a great deal of enthusiasm among our fighters. Prob-



THE STAR-SPANGLED BANNER
(The Oregon's band immediately after the fight)

ably one of the most picturesque examples of enthusiasm displayed in this war is shown in the illustration by W. A. Rogers in Harper's Weekly for August 6. This is drawn from a photograph showing the band on the Oregon just after the surrender of the Colon. The men, all of whom took an active part in the manning of the guns, did not stop to wash or dress, but with one accord gathered together on the forward turret, and, amid the cheers of the crew, played the "Star-Spangled Banner."

Neither glue nor rivet will mend a broken promise.

A SERMON ON SAVING.

Our most important crop is the Boys and Girls we raise on the farm, and their proper training is a matter of vital interest to all. A proper training consists in the development of all their powers equally by giving them a thorough, well-rounded education of the mind while their eyes are taught to see and their hands to do.

The Kansas State Agricultural College

OFFERS A CHOICE OF FOUR COURSES:

Agriculture, Mechanical Engineering, Household Economics, General.

Splendidly equipped Iron and Wood Shops, Laboratories, Greenhouses, Dairy, Sewing and Cooking Rooms, Music Rooms, and Library. Military drill and shop work daily. Music and Oratory free. Text books and stationery at cost. Noon lunches at cost.

No fees or charges of any kind. For catalogue or information address
PRESIDENT THOS. E. WILL, Manhattan Avenue, Manhattan, Kas.

WASHBURN COLLEGE TOPEKA, KANSAS.

A Co-Educational Christian College of high grade. Three full courses of study, leading to degrees. Bachelor of Arts; of Science; of Letters. Preparatory Academic course of three years, leading to Freshman.

Equipment First-class. Beautiful Campus of 160 acres; six fine buildings; Library over 7,000 volumes; Laboratories; Museums; Ladies' Dormitories; Gymnasium.

Instruction Thorough. Fifteen competent professors; many of them specialists in their departments; Courses in Languages, Ancient and Modern; English; Science; Mathematics; History and Political Economy; Elocution and Oratory; Philosophy; Music and Art. Special courses in the study of the English Bible.

Expenses Reasonable. Tuition \$40 per year. Board \$2.00 to \$3.00 per week. Room rent low; no incidentals. Occasional opportunity for self-help.

Situation Ideal. Topeka is reached by four railroads. College is two miles southwest of the center of the city, reached by electric car every twenty minutes. Combines advantage of both city and country.

FALL TERM BEGINS SEPTEMBER 14.

For Catalogue and Information, address

GEO. M. HERRICK, President.

KANSAS FARMER

ESTABLISHED IN 1863.

Published Every Thursday by the
KANSAS FARMER COMPANY.

OFFICE:
No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

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

ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.
Annual cards in the **Breeders' Directory**, consisting of four lines or less, for \$15.00 per year, including a copy of **KANSAS FARMER** free.
Electros must have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

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

KANSAS FARMER CO., Topeka, Kas.

RUSSIA PROPOSES UNIVERSAL PEACE.

One of the most remarkable public documents ever given out from any ruler was, on August 28, by order of the Czar of Russia, delivered to the foreign diplomats of every government represented at St. Petersburg. It is an invitation to the governing powers of the world to join in a conference whose purpose shall be to conclude a universal peace, to be observed throughout the world for all time. Such a proposition, coming from a ruler whose military strength has for generations been a wonder, coming at a time when there are in sight of the Russian monarch conquests such as have not been in recent years, has naturally arrested the attention of statesmen and philanthropists as well as warriors.

The reasons assigned for the remarkable call are in the highest degree creditable to the mind and heart that conceived them. These may be outlined as follows:

For twenty years civilized nations have had a great longing for peace.

It is better that the nations guarantee peace than that they go on developing their military powers in proportions unprecedented.

The expenses of great armaments strike at the root of prosperity, and turn into unproductive channels the intellectual and physical strength of the nations.

The burdens of providing these armaments, which may be made according to the requirements of to-day, but become worthless on account of new discoveries to-morrow—these crushing burdens cause economic crises which are continually growing more oppressive.

The remarkable note ends with the following paragraph:

"This conference will be, by the help of God, the happy presage for the century which is about to open. It would converge into one powerful focus the efforts of all states sincerely seeking to make the great conception of universal peace triumph over the elements of trouble and discord, and it would, at the same time, cement their agreement by a corporate concentration of the principles of Europe and right whereon rest the security of states and the welfare of peoples."

LABOR DAY PROCLAMATION.

Governor Leedy has issued the following Labor day proclamation:

Whereas, By legislative enactment, the first Monday of September of each year has been set aside as Labor day;

Now, therefore, I, John W. Leedy, Governor of the State of Kansas, do hereby recommend that Monday, September 5, 1898, be made a public holiday, and to this end, that all business, both public and private, be suspended as far as practicable. That the day be devoted to the consideration of the many pressing and perplexing problems connected with the forwarding of the interests of toilers. Let the employer and the employed meet on the common plane of humanity and mutual interest and discuss the means of advancing the welfare of all, free and untrammelled discussion being the greatest safeguard which can be thrown around our liberties. We can then return to our homes and customary avocations and meditate on the many new ideas that will necessarily be suggested to us and determine what shall be done to advance labor to the position of dignity it is destined to occupy in this great republic.

The G. A. R. will meet in Cincinnati September 5-10, 1898. They will leave here in special train via Santa Fe, September 5. The round trip fare is \$16.10. Santa Fe agent will give you particulars.

MORE BEET SUGAR LITERATURE.

The great volume of excellent literature which this country has within the last few years produced on the subject of beet sugar has received a marked addition in the report recently published from the Chemical division of the United States Department of Agriculture. A notable feature of this work is a map showing the serpentine strip of country in which the mean summer temperature is thought to be that favorable to the production of beets suitable for sugar manufacture. This strip keeps pretty well to the northern central part of the United States in the eastern portion, borders the Great Lakes, and continues nearly west until it approaches the Rocky mountains, when it becomes very devious in its course, sweeping southward along the eastern ranges into New Mexico, winding its way to the Pacific coast and extending for a long distance along the coast.

The book devotes much attention to the science of beet sugar making, gives much information as to the quality of beets produced in the various portions of the region designated as favorable, and as to the various details interesting to those about to engage in the sugar industry, and takes up in a general way the advantages to the farmer and to the country at large. The present protective laws as to sugar are commended with reservation of opinion as to how long they will be needed or desirable.

One looks in vain, however, in this, as in other publications on the subject, for evidence of the profitableness of the sugar industry for those who may engage in it in this country. There are many arguments to show that the farmer should raise beets, but it is nowhere shown that producing beets for the sugar factory will pay him as good returns as he gets from corn, clover and hogs or from other of the combinations to which the farmer is accustomed and for which he has the appliances. He is assured that much hand labor is at present necessary to the production of beets of such quality as will be acceptable at the sugar factory; but is assured by many writers that Yankee ingenuity will presently overcome this objection.

The fact that capitalists are constantly on the outlook for chances to invest in enterprises which may be considered reasonably sure to pay 5 or 6 per cent. if only they can place under a single management an amount large enough to pay for competent supervision, places the sugar industry in the category of interesting inquiry. If the sugar development shall take on such proportions as shall afford opportunities for stock watering and bond operations manipulators of capital will regard it with great favor. But among all those who, from any point of view, urge upon the farmer the economic importance and possible personal advantage of engaging in the production of sugar beets, among all those seeking profitable investment for capital, among all those seeking employment for energy and skill, the first has yet to be heard from who himself proposes to produce 1,000 or more acres of beets to be delivered to any proposed sugar factory at the prices named as so advantageous to the farmer. When the inquiry is closely pressed it is found that in Germany—from which country has come the competition which has brought down the price of sugar—in Germany the beets are produced in small patches and largely by the toil of the women and the little ones. The American farmer, who holds that his wife and children are entitled to dainty treatment, and who, with his rotations of corn, wheat, oats, clover, grasses, potatoes and fruits, with his beef, pork, dairy products, etc., is able to give them American rather than European conditions, is not likely to be favorably impressed with the idea of driving his wife and little ones to the fields, even though for the very commendable purpose of retaining within the shores of America the \$100,000,000 given as the amount annually sent abroad to pay for imported sugar.

It may be impossible at this time to say what changes in the geography of the world will take place on account of the late war. There can be little doubt, however, that the Spanish West Indies will eventually, and before many years, become parts of the United States. The sugar-producing capacity of these has been very great, even under the uncertainties of the inefficient and semi-barbarous Spanish rule. Heavily taxed, under great expense for protection, and in constant danger of destruction at lawless hands, the Cuban sugar industry had before the late insurrection such potential capabilities of production that only by the payment of export bounties could Germany compete, even when the women and children were in the fields. Cuba is now certain of stable and efficient gov-

ernment, even if not immediately incorporated into the United States. Her sugar industry must be expected to assume proportions undreamed of under old conditions. Even if her sugar must for a time pay duty to enter the United States, it will be a stronger competitor than the sugar of Germany ever had in American markets. How shall the beet sugar industry in this country endure such competition when it has had so little development under more favoring conditions. Are far-seeing capitalists likely to invest in sugar plants in this country in the face of the irresistible conviction that trade must sooner or later be free between the West Indies and the United States? And the Philippines are reputed to be well suited to the production of cane sugar. The uncertainty as to their destiny is not likely to last long. While it lasts it is a menace to investment in the sugar industry in this country, and, if settled according to the ideas of the imperialists, the sugar from those islands will be dumped with that of Hawaii upon our coasts. The cute financier is not likely to invest his money in development of an industry to be thus destroyed.

SWAN IS DEAD.

Joseph C. H. Swan, famed in Kansas for his twenty-year cycle weather theory, died in the hospital at Wichita, Monday. He was 74 years old and could no longer support himself, and much to his grief became a county charge, and later his bodily weakness carried him to the hospital. Poor old man! What a struggle his life has been and how genuinely sad its end! How tenaciously he hung to his theories, secrets he wrested from nature and which he gave to the world without price. For Swan was generous; he seemed wholly lacking in selfish thoughts. It grieved him that men refused or neglected his cycle theory, returning meteorological conditions certain as the sun's rising and setting, as he believed, each twenty years. His little book, embodying his observations and theories, is his only monument, for he sleeps now in an unhonored and unknown grave.—El Dorado Times.

No one ever held to any theory more tenaciously or more honestly than old man Swan did to his theory that the seasons are ever repeating themselves in cycles. To him it was more than a theory—it was a fact. Others in the centuries before him had held the theory, though it is doubtful whether he ever heard of them. But from an actual record kept by himself for over sixty years, with information gathered by him going back of his experience fifty years, he believed the cycle fact was established. His little book, printed more than ten years ago, containing predictions twenty years ahead, has certainly had some remarkable verifications. The old man firmly believed that his little book unlocked a secret of nature of vast value to mankind. The perpetual sorrow of his life was that so few people could be induced to believe in his "discovery." Peace to the old man's ashes.—Marion Record.

Older readers of the *Kansas Farmer* will remember Mr. Swan. His great complaint against mankind, especially against those in authority in affairs of state and those in control of means of communicating with the public, was that they persistently refused to recognize the great value of his predictions, to pay him liberally for them and to give them to a suffering world. He made many trips to Topeka during many years for the sole purpose of convincing the Governor, the Secretary of the State Board of Agriculture and the editor of the *Kansas Farmer* of the error of their ways. The *Kansas Farmer* Co. went so far as to buy a considerable number of his books a decade ago. Several of these are still on the shelves. "The Future by the Past" is the title of this modest volume, which Mr. Swan considered only an introduction to the vast store of valuable information which he could confer upon the world if only those in position to hand it out would cease to be so perverse as to refuse to spread the light, whose value they must have recognized. It is not without some feeling of sadness that we realize that we shall no more hear his earnest appeal, no more receive his queer letters.

Steam Engineering.

Editor *Kansas Farmer*:—Can you give me information through the columns of *Kansas Farmer* where I can get a book on steam engineering, also price of book?
HENRY BARKELL.

Little River, Kas.

The subject of steam engineering is so broad and the literature so extensive that the selection of one book suited to your needs is rather difficult. The following are excellent works: "Thurston's

Philosophy of the Steam Engine," price 75 cents; "Thurston's Stationary Steam Engine," \$1.50; "Thurston's Manual of the Steam Engine," two parts, each \$7.50; "Whitham's Constructive Steam Engineering," \$10. The foregoing published by Jno. Wiley & Sons, New York, N. Y. "Evers' Steam and the Steam Engine," price \$1, published by G. P. Putnam's Sons, Nos. 27 and 29 West Twenty-third St., New York, N. Y. A letter to the Mechanical Department, Kansas State Agricultural College, stating the nature of book desired, will be gladly answered.

GRANGE PIONIO AT BERRYTON.

All previous efforts at picnicking by the Berryton Grange were eclipsed last Friday, when over 500 people sat down to an elaborate repast in the beautiful walnut grove just south of the Missouri Pacific station. The morning train brought out a delegation from Topeka, including Marshall's band, which rendered some of its choicest music and was one of the chief attractions on this occasion.

Berryton is noted for its hospitality, prosperous farmers and its handsome and intelligent ladies. Nothing is drunk at Berryton save sparkling well water, soda pop and lemonade, consequently there is no need of a city Mayor or police force, and the bloom on the cheeks of its fair daughters and young men is not marred by over-indulgence. Although the day was excessively warm, the crowd managed to keep comfortably cool, and were not wearied by long-winded speeches or tiresome dissertations. The first speaker in the morning was Mr. E. Westgate, a farmer living at Manhattan. He began by saying that "The Lord tried the experiment of renting the Garden of Eden, and everything went on happily until it came time to harvest the apple crop; then the renters, not satisfied with 99 per cent. of the crops of the farm, stole the 1 per cent. reserved for rental, whereupon the owner issued a new decree, dismissed the culprits and let them hunt for themselves. Thorns and thistles, cockleburs and other vile weeds, coupled with drought and famine, war and pestilence, distress and death, became the inheritance of all future generations. Corruption of every kind soon reigned supreme, the rich oppressed the poor, the poor turned upon and slew the rich; but he believed, through the intervention of fraternal agencies, the world was growing better. Combinations and organizations are both powerful means of accomplishing results too great for the individual alone. But the two are not the same. A mob is a combination, an army an organization, and the army always proves itself the superior. A few years ago, Congress began to realize that a more efficient navy might become necessary to the maintenance of our standing among the nations of the earth. We had the material, but for the time being it was useless for our defense. The coal in the mines, the iron in the mountain, timber in the forests, architects capable of designing scattered through the land ready to make designs and put them in operation. Straightway our government gave the order and we had a fleet of war vessels, staunch and strong, that laughed at disaster, and has been the wonder and admiration of the world." Mr. Westgate said, in conclusion, "There are three objects of the Grange—one to secure just legislation, one to protect its members financially through co-operation, and the other, more important than either, the elevation of its members."

After dinner and music by the band, the chairman, Mr. Coultiss, introduced Hon. A. P. Reardon, of McLouth, who gave a brief history of the Grange and its results. He stated that twenty-three years ago the farmers that now are its most zealous supporters had no system, and every one was pulling in a different direction. He stated that the Grange organization in the United States represented nearly 1,000,000 members, and has exerted an influence that has been felt all over the world. The speaker, in his remarks, referred to the educational advantages of the order, and mentioned the results of the war with Spain as growing out of its principles of unity and patriotism. The Grange kept clear of politics, but was always found as the advance agent of prosperity; policies of insurance were issued, covering both fire and lightning, at the low rate of one-half of 1 per cent. to members, the entire management being effected with very little cost. The Grange, he said, makes better citizens and better farmers, and Kansas has great need of more organizations of this character. He said the first load of hay he cut for market was hauled to Leavenworth and brought the munificent sum of \$7. This hay was cut with a hand scythe and raked by hand. He felt exceeding rich from the proceeds of this one load, although it cost him several hard days' work. He believed that the farmer should be just as well educated as was the gunner on the war ship, and that agriculture should be conducted just as systematically as the army and navy. Discussion of live topics in the Grange meetings had led to great results, and no class of people were in more need of information concerning their calling than the farmer. He advised every Grange organization to build a hall for meetings, and not fail to admit wives and daughters to membership, thereby promoting a spirit of sociability. If the latter are helpful in the home circle, why should they not be in the lodge room? He said some men overestimate their own ability, for he had known those who thought they could run the affairs of our government, when, in fact, they could not manage a quarter section of land.

The next speaker was Miss Alice G. Herring, who is Secretary and Treasurer of Lodge No. 104 Universal Brotherhood, Denver, Col. Since leaving home she has as-

elisted in organizing a branch of the same order at Trowder Heights, near Carbon-dale, Kas. The meetings are held on the first and third Sundays of each month. Miss Herring said, in part: "The agriculturists should be as well united and organized as the capitalists, as no class can work independently of each other, and no farmer, however well-to-do, should feel that independent as to isolate himself from his neighbors. Whatever has led up to his success should be disseminated freely among his fellow men. One of the principles of the order which Miss Herring represents follows: "The principal purpose of this organization is to teach brotherhood, demonstrate that it is a fact in nature, and make it a living power in the lives of humanity."

The day's festivities were drawn to a close by music from the band, and rural sports, such as potato races, sack race, running race and the "fan drill." Twelve young ladies and the same number of young men were escorted by the band from the village, where they had donned their red, white and blue sashes, to the grove, where the ladies went through the drill under the captaincy of Mrs. Havercott. This is called the fan drill, but, in fact, is composed of a great number of fancy movements, which were well executed and brought out much applause. The twelve young men followed in a sort of burlesque on the drill of the ladies.

The whistle of the train was heard through the sunflowers just as the last sport had concluded, and everybody scrambled to the station, saying that Berryton and her generous citizens had done themselves proud in an effort to make the stranger within their gates happy.

A. E. JONES.

OKLAHOMA EXPERIMENTS WITH WHEAT.

The yield of wheat on the Oklahoma Experiment Station farm, at Stillwater, was much reduced by rust and somewhat by chinch bugs. The wheat plats were on upland prairie soil, without special manuring. In the variety tests eighty-six plats with fifty-six claimed distinct varieties gave an average yield of 19.6 bushels per acre, compared with 39.6 bushels in 1897. The largest yields were: Early Red Olawson, 35.2; Big English, 34.5; Fultz, 33.4; Fulcaster, 32.2; Red Russian, 30 bushels. Of these the three last named were among the best in yields in 1897 and are counted as desirable as any tested. Thirty-four plats gave yields of between 20 and 30 bushels per acre, while twenty gave not more than 15 bushels per acre. In no case did the wheat reach standard weight, many plats testing 55 to 56 pounds per bushel. The wheat was sown September 20-22, and matured from June 8-11. The soil was dry at the time of seeding and for weeks thereafter. The wheat did not get a good start in the fall. It was somewhat injured by the frost of March 22-23. There were marked differences in the yield of straw—varying from less than 1,400 to more than 5,000 pounds per acre.

Plats were sown at intervals from September 10 to November 15. The soil was so dry that the earlier sowings came up slowly. In general the best yields were from plats sown September 25 or October 5, no plat sown in November giving an average yield.

In connection with the time tests there was a test of thickness of sowing, plats being sown at intervals at rate of 3, 4, 5, 6 and 8 pecks per acre, four plats at each rate. The average yield increased from thinnest to thickest seeding, with almost no difference whether 5 or 6 pecks were sown. In favorable seasons thin often gives as large yields as thick seeding; in unfavorable seasons thick seeding is safer.

No perceptible benefit came from rolling the land in addition to harrowing it before seeding.

Manhattan, Kas., August 30, 1898.

Editor Kansas Farmer:—We are having applications daily for Zimmerman wheat for seed. The college has none for sale. We have sold hundreds of bushels in past years and I would suggest that the Kansas Farmer invite those who have purchased seed from the college and now have this wheat for sale to advertise in the Farmer. We have applications for as much as 250 bushels from a single farmer.

H. M. COTTRELL.

Kansas State Agricultural College.

The Oklahoma Agricultural and Mechanical College, at Stillwater, will open September 12, with a faculty of fifteen instructors and increased facilities in all departments. New courses will open in civil and mechanical engineering, commercial stenography and typewriting and music. A new building is being erected for the engineering department. The college receives students direct from the public schools, and has a preparatory department for review of common school studies. Tuition free except for music. Students of either sex are admitted at 14 years of age.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending August 29, 1898, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

A dry, hot week. Fair rains occurred in the northeastern counties from the northern part of Marshall eastward to the Missouri river; in Morris, extending thence east to the Missouri line; in Cowley, the southern part of Barton, and in Morton, extending thence to the southern part of Gray. Local showers in the other counties of the eastern division, with but little rains elsewhere.

RESULTS.

EASTERN DIVISION.

Corn generally is in good condition. In many of the counties the early corn is being cut and shocked. In the southern halves of Marshall and Atchison the corn is being damaged by the dry, hot weather, and in Bourbon the late corn is suffering from the same cause. Much plowing has been done, but at the close of the week the ground is becoming dry. In Labette farm teams are suffering from heat.

Allen county.—A clear, still week, oppressive but good for haying and pastures; flies scarce and stock doing well; early corn ready to cut, late corn doing well.

Anderson.—Much of the early corn now in shock and this week's rain insures the later plantings, the crop is good except where flooded earlier in the season; a large acreage plowed for wheat, which is now in good till.

Atchison.—Good rain in the north part, but little in the central and south parts; prairie hay mostly in stack, yield somewhat less than last year; ground too dry to plow and early corn firing in south half of county, the corn being in bad condition; fruit of all kinds scarce and poor; a very hot week.

Bourbon.—Dry, hot week; early corn being cut and is a fine heavy crop; late corn being cut short by heat and drought.

Chase.—Corn is maturing and is being cut, will make a fair crop; considerable alfalfa will be cut for seed; apples will be a fair crop and good quality; ground is getting dry for plowing.

Chautauqua.—Farmers busy plowing for fall sowing, cutting corn, haying or threshing; corn already cut verifies the estimates of a large crop.

Coffey.—Warm week, with a good rain 24th; corn ripening rapidly; haying nearly

haying nearly finished; good yield, fine quality.

Riley.—Mean temperature 11 deg. below normal, rainfall .69 inch below normal; corn being shocked; Kaffir corn promises a fine crop; pastures are very good; alfalfa will be sown this fall.

Shawnee.—A fine week for late corn; haying about finished; grapes good.

Wilson.—A warm, dry week; some fields of corn planted on wheat stubble need rain.

Woodson.—Corn doing well; Kaffir corn and sorghum for feed are fine; millet is good; early corn being shocked; rain needed to lighten plowing; peaches drying up on trees.

Wyandotte.—Early corn almost made and late corn doing finely; potatoes on very wet land rotting badly; pastures in good condition; apples almost an entire failure.

MIDDLE DIVISION.

In the southern counties the early corn is generally made and is being cut and shocked. In Barton, Rush, Phillips, Osborne, Cloud, Ottawa and McPherson the corn crop is largely ruined as a grain crop, but much will be saved as fodder. In the other central and northern counties the hot, dry weather is injuring the late corn. Haying and threshing have continued. Plowing continues in some of the counties, but in many the ground is too dry.

Barber.—Hot, dry week; a large crop of corn is assured; corn-cutting is in progress; soil too dry to plow; cattle are doing well.

Barton.—Very little plowing done; corn dried up, making small crop; second crop of alfalfa is short but ready to cut; pastures improving since last rain.

Cloud.—Hot, dry week; pastures drying rapidly; much of the prairie grass dry enough to burn; all corn nearly dead, will be some corn but it will be chaffy; plowing being done, with no signs of moisture in the ground; fine progress made in threshing; haying about done, quality good.

Cowley.—Hot, sultry week, good for haying and cutting corn, which are now in progress; plowing about done; stock doing finely, plenty of water.

Dickinson.—Vegetation rapidly drying up; late corn will not amount to anything.

Edwards.—Hot and dry; prairie haying in progress, the crop is abundant; farmers cutting the ground with disc harrows for fall seeding; apples about fallen off.

Harvey.—A hot week; getting dry; grain stacks slowly drying out, and threshing now in full progress; ground being prepared for seeding.

McPherson.—Hot and dry, too dry for plowing; threshing brisk, and is about the only work being done; much corn fodder cut.

Phillips.—Another hot, dry, dusty week;

but fine for threshing, which is nearly over; the feed crop is made and is being cut as fast as possible; the yield of threshed grain is disappointing, but the quality in some cases is better than expected. Sherman.—A hot, dry week; early corn about made; late corn needs rain; forage crops doing well. Thomas.—Another hot, dry week and considerable threshing is being done; hot winds on two days.

PAINT TALKS—VIII.

Why a Combination of Zinc and Lead is "Non-Poisonous."

All the salts of lead, including white lead, are extremely poisonous compounds, and nothing can be added to them which will make them non-poisonous if taken into the system. Therefore the lead in a combination paint is of itself as poisonous as the lead in a keg of "strictly pure carbonate." But in the combination paint, the lead is, first of all, diluted. Suppose the mixture to be half lead and half zinc white; this reduces by one-half the quantity of poisonous material in a given bulk of the dry paint. Furthermore, such a combination will require about 50 per cent. more oil than the pure lead would need to make it ready for use, thus reducing still further the quantity of the poisonous material in a given bulk of the paint.

The foregoing considerations are of special interest to the painter, he being the only one whose health is jeopardized in the application of the paint. But the most important consideration is the behavior of the paint after it has been applied. It is well known that pure lead paint quickly crumbles and falls into powder—"chalks off," in painters' parlance. This lead dust or powder is poisonous, and especially so to women and children. It may not produce severe lead poisoning, but it does injure the health. Now zinc white does not crumble from the painted surface, and when combined with lead it prevents the latter from crumbling. Hence with a combination paint made of zinc and lead there is no "chalking off," and consequently no possibility of lead poisoning.

A lead combination paint containing zinc is, therefore, perfectly safe to use as far as the health of those living in its presence is concerned, and relatively safe as regards the health of the painters who apply it.

Some French authorities claim that pure zinc white is superior to white lead on every account, and one prominent Parisian firm of contracting painters use no white lead in any of their work; but, taking conditions as they are and experience as it runs, this is rather an extreme view. Painters are familiar with the use of lead, it is very opaque, and when properly combined with zinc to hold it in place, and to whiten it, makes generally a satisfactory paint. But alone it is not a good paint and is anything but economical. Compared with the best combination paints it costs more per pound, requires fully 50 per cent. more of it to cover satisfactorily an equal surface, and needs renewal in a much shorter time. On every consideration the combination paints have the advantage. STANTON DUDLEY.

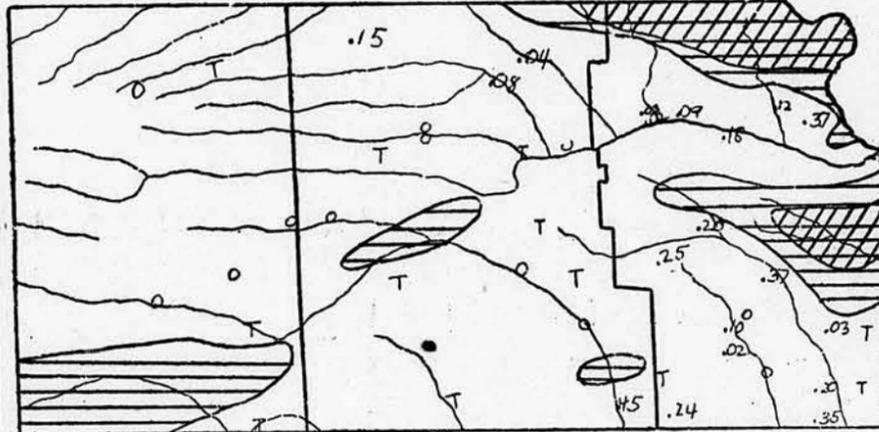
The Scolytus Rugulosus Again.

Editor Kansas Farmer:—In a recent issue of your paper, Mr. Percy J. Parrott, of Manhattan, notes the appearance of the fruit bark beetle (Scolytus rugulosus) on the college grounds at that place, stating his opinion that this is the first appearance of this pest in the State. In the latter conclusion Mr. Parrott is mistaken. I found the insect in question last year in considerable numbers in every quarter of the State visited during my inspection of nurseries for San Jose scale, and bred it by the hundred from infested trees the past winter and spring. I presented my observations upon this insect before the State Horticultural Society, at its meeting in Topeka last December, and since then have also remarked upon it before the Missouri Valley and Shawnee County Horticultural Societies.

The insect is one that needs chiefly the attention to dying trees and brush piles at the proper time. Infested wood carried over winter in the breeding cages produced, as I have said, hundreds of the beetles the spring following. If all blighted or diseased trees (these being usually attacked) were destroyed by burning during fall or winter the inordinate multiplication of the beetle would be checked and its attacks minimized if not entirely prevented.

I have observed it to attack especially blighted trees of pear and apple in the nurseries, though cherry and plum were also attacked by it, and older trees sometimes more seriously than those of nursery size. E. A. POPENOE.

Entomologist State Horticultural Society and State Board of Agriculture. Topeka, Kas., August 27, 1898.



ACTUAL RAINFALL FOR WEEK ENDING AUGUST 27, 1898.

over, a very large crop; quality of late-made hay reduced, in eastern part, from the unaccountable fact of dead grass appearing in it, though the moisture was ample during the season; peaches rotting badly.

Crawford.—A dry, hot week; haying well along; plowing for wheat about finished.

Elk.—A warm, dry week; corn drying rapidly.

Franklin.—Late corn earing finely, giving good promise; apple crop very light.

Greenwood.—A very hot week; hay mostly in stack; corn-cutting in full progress; stock water becoming scarce in some localities; peaches very poor.

Jackson.—Ground dry for plowing, but little being done; corn not much improved during the week.

Jefferson.—A good week for haying, which is nearly done; a fine week for maturing early corn; fall plowing for wheat and winter fallowing; rain beginning to be needed.

Johnson.—A good week for plowing and threshing; corn very promising; peaches and pears coming into market; apples almost a failure; potatoes a good yield and quality; wheat very light; are threshing stacked flax and oats, light yield but better than early threshing.

Labette.—Haying still in full force; corn maturing nicely, corn-cutting begun; some are plowing, but teams suffer from heat, though ground is in good condition; potatoes poor.

Leavenworth.—Plowing for wheat nearly done; corn-cutting begun, crop medium; late potatoes fine promise; peaches and pears ripening, scarce; pastures weedy; stock fairly good; haying done, good average crop; threshing finished.

Lyon.—Hot weather, rapidly maturing the corn; ground becoming too dry to plow.

Marshall.—Tuesday, the 23d, the finest rain of the season in the north half of the county, barely a trace in the southern part; corn and pastures greatly benefited and doing well in the north part, but being damaged in the south part, where late peaches and apples are drying and falling off.

Morris.—A very good week for corn, and farm work in general; haying about finished; ground in excellent condition and being prepared for wheat.

Neosho.—Corn-cutting nearly done; plowing for wheat in progress; peaches and apples not very good.

Osage.—Fine week for corn; all crops in fine condition; marked improvement in pastures; farmers plowing; plenty of old corn on market now.

Pottawatomie.—Dry, hot week; corn is promising better than last year; prairie

everything drying up; corn is past needing rain; threshing nearly done.

Reno.—Dry, hot week, light winds; plowing in progress first of week, now stopped, ground getting too dry; the weather will damage late corn, but early plantings, where clean, will make a moderate crop; some early sown cane being cut for fodder; grapes plenty and peaches fair crop.

Rush.—Very warm and dry; rain now would be of little benefit to crops but would help plowing; threshing progressing rapidly, but not much wheat being marketed.

Russell.—Hot and dry; no rain; too dry to plow; threshing and haying still in progress; corn-cutting nearly finished; many storing wheat.

Saline.—Everything is drying up; many peach orchards that promised well will scarcely have a bushel of marketable fruit.

Sedgwick.—Plowing in progress; a good hay crop is being put up.

Stafford.—A clear, dry week, very favorable for threshing and haying.

Washington.—Hot, dry week; peaches small and light crop; grapes ripening and a fair crop.

WESTERN DIVISION.

The dry weather this week has been improved by the threshers, and much threshing has been done. Early corn is made, though in some counties it is light in weight. Late corn is being damaged by the weather conditions, but would be helped yet if rain comes soon. The buffalo grass is curing on the range, assuring a good winter pasture. A large forage crop is being cut and put up.

Clark.—Kaffir corn and cane being cut; grass getting brown; everything dry.

Decatur.—Another clear, hot week; but not quite as hot as the preceding; late corn badly injured; early corn will be light weight, but is holding out well.

Finney.—A hot, dry week; range grass drying; cattle suffering some from heat and flies but otherwise are doing very well; all are busy harvesting a good crop of prairie hay, sorghum and millet; buffalo grass curing nicely, which assures a good fall and winter pasture.

Ford.—Warm, dry week; a large crop of fodder and early corn; there will be a fourth crop of alfalfa on fields that are not saving the third for seed.

Gray.—Good rain in the south part of the county, very dry everywhere else; corn a fair average in quality, now out of the way of frost; little threshing done yet.

Morton.—Hot and dry, but fodder crops and grass are in fine condition.

Ness.—A hot, dry week; dry for plowing

Horticulture.

THE FRINGED-WING APPLE-BUD MOTH.

From Kansas Experiment Station, Manhattan, Kas.:

"During the last two years the fringed-wing apple-bud moth (Nothris maligemmella) has been doing considerable damage in various parts of the State. Judging from its work here and what it has done in Missouri it promises to be a very troublesome if not one of the most destructive pests attacking our apple trees. The insect was seen in Riley county one year ago last spring, but as the injuries from it were comparatively insignificant it attracted but little attention and remained unidentified. So far as has been ascertained the insect is pretty well confined to the eastern counties of the State. During the spring of the present year, Prof. Faville and assistant made several trips to various parts of the State, and reported the presence of the pest in nine counties, comprising Johnson, Leavenworth, Douglas, Wyandotte, Jefferson, Osage, Greenwood, Wabaunsee, and Riley.

"The Entomological department desires to ascertain the present distribution of the pest, and to that end solicits correspondence from those suspecting its presence in their communities. The following facts regarding its appearance and life history will assist in its identification. That it may not gain a much wider distribution a number of remedial measures are given, some of which should be used as soon as any work of the pest is discovered.

"The insect attacks the apple principally. A more extensive examination will no doubt reveal that it is common to other fruit trees. In Manhattan it was found on the pear, peach and plum, but in much less numbers than upon the apple.

"The adult is a small moth with an expanse of wings of about two-thirds of an inch. It is of a brownish buff color with more or less bluish gray shading on thorax, wings and body.

"The following is a brief description of the life history of the insect: The adults appear early in the spring and the females commence to deposit very small yellow eggs singly in the expanding buds and leaves. The eggs are usually deposited at night, and the number laid by one female is estimated to be about twenty-five. The eggs hatch in about a week. When the larvae or worms first emerge from the eggs they are very small, about one twenty-fifth of an inch in length, and are of a light yellow color, with the head a shining black, and the upper part of the next segment brownish. It is these little caterpillars or worms that do the damage. The larvae begin to feed upon and to attack the buds or adjacent leaves. The damage to the buds is the most serious. When these are attacked the larvae draw several of the central leaves of the buds together over themselves as a sort of protection; and within the shelter thus provided they work their way down the center or heart of both the flower and leaf-buds. It is not long before the young shoot with its terminal bud and developing leaves and flowers is cut off, or injured to such an extent that it soon withers and dies, thus destroying the prospect for next year's crop, besides checking the growth of the shoot. Often the larvae are so numerous about the buds that they are compelled to abandon the buds and seek the leaves. This they will do either by dropping down to a lower leaf by means of a tiny thread or by crawling down the shoot, wandering from one place to another till a suitable leaf is found. Upon reaching a leaf they will draw the edges of it together by fine threads, making a sort of a case, in which they rest when not eating. When there are no close adjoining leaves they will commence to feed on the leaf furnishing them shelter. Some seem to prefer the petiole of the leaf to the leaf itself, and in a number of instances the petiole or stem is severed, causing the leaf to fall to the ground with the larva. In a severe attack the buds and terminal leaves are often injured to such an extent that the trees have a brownish appearance. Besides attacking the leaves and the buds the larvae also eat away the stem of the young apples just forming, causing them to fall, and in some instances bore into them, inducing them to shrivel. The first brood of larvae this year lasted from the 15th of April to the 4th of June.

"Owing to its peculiar habits the pest is a difficult one to combat, necessitating, as it does, very close observation upon the part of the operator to determine just when the larvae are hatching,

Then, just when the larvae are emerging, is the time to spray. Also one must take into consideration that larvae will appear from eggs laid later than the first. To combat these a second spraying is necessary, and possibly a third or fourth in order to guard against later appearing larvae. Spraying with Paris green or London purple at the rate of one pound to 150 gallons of water, with from one to two pounds of lime, is the most effective remedy."

Washes for Orchard Trees--Cultivation or Clover.

Augusta, Kas., August 16, 1898. Fred Wellhouse, Topeka, Kas.—Dear Sir: I write you to inquire what your opinion is about using a formula of two parts of lime, run off as plasterers use it for plastering, and one part of coal tar, mixed with water to about the consistency of paint, and applied to the bodies of young apple trees with a brush to keep the rabbits from gnawing them. Do you think the above is injurious to the trees? I have tried it three years and I do not see any bad effect on the trees, but am told by some that it will eventually ruin the trees; that it closes up the pores in the bark. I would also like your opinion in regard to caring for an orchard of six- or seven-year-old trees. Last two years I have cultivated about six feet on each side of the row and kept the ground pretty free from weeds, and in the space between the rows have raised oats, corn and millet, but I am thinking of seeding my orchard down to white clover and blue grass this fall or next spring, and hereafter to use a hoe and keep the weeds cleared off for a space of five or six feet around the body of the tree and then use a mower several times during the summer and cut all the grass and weeds and leave it laying on the ground. My trees are set two rods apart in the rows and the rows are twenty-eight feet apart and the trees are set with a tree opposite the space in the next row, which makes my trees all through the orchard thirty-three feet apart; that is, there is no tree within thirty-three feet of another. I have eighty acres set in this way. I have been thinking some of cultivating my orchard hereafter the same as one cultivates a corn field, and let nothing grow on the ground but the trees, but am anxious to learn if it would be any better for the orchard than to seed it down. If you so desire, you can answer through the Kansas Farmer, and in that case it may benefit many others. Yours respectfully, GEO. W. BROWN.

Geo. W. Brown:—Dear Sir: Rabbits have such a propensity for gnawing that we do not want them in the orchard, even if our trees are well wrapped, and so we catch and kill them if we can. But some orchards are situated where there are natural hiding places for the bunnies, so they have no need for our traps and will not go into them. In that case, wrappings or washes become imperatively necessary, and washes are usually the first thing that comes to our mind, because they are cheap and quickly put on.

Lime is all right for a wash, but it soon washes off by the rains. Coal tar will shut up the pores of the tree worse than oil paint, and will not mix with water. Some of the experimental stations have been testing these washes and have decided that hydraulic cement and skim-milk make the most durable wash for trees.

We commenced last spring using a wash composed of Acme cement and skim-milk, and all the rains this summer have not washed it off.

Try this, Mr. Brown, and I think you will like it. You can stir in a little coal tar, say a spoonful to each bucketful, to scent it.

Second—In seeding down your six- and seven-year-old trees do not use blue grass. It forms too dense a sod. Red clover is the best crop you can put in.

Keeping the ground clean for five or six feet around the trees is all right if you feel like doing it, but it does but little good. Where the small rootlets or feeders are is where cultivation is needed, and most of these are rods away from the tree. Sincerely yours, F. WELLHOUSE.

Topeka, Kas., August 18, 1898.

The Home Propagation of Fruits. Editor Kansas Farmer:—It is the common desire among American homemakers to surround their dwellings with orchards, bearing fruit in season and supplying through much or all of the year the most desirable element of human food. It is not fashion or whim that prompts this desire, but a realization of the value and pleasure of good

- ARMSTRONG & McKEIVY Pittsburgh.
REYMER-BAUMAN Pittsburgh.
DAVIS-ORAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANGOR Cincinnati.
ECKSTEIN Cincinnati.
ATLANTIC New York.
BRADLEY New York.
BROOKLYN New York.
JEWETT New York.
ULSTER New York.
UNION New York.
SOUTHERN Chicago.
SHIPMAN Chicago.
COLLIER Chicago.
MISSOURI St. Louis.
RED SEAL St. Louis.
SOUTHERN St. Louis.
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORWELL Buffalo.
KENTUCKY Louisville.

NOTWITHSTANDING the extravagant assertions of the manufacturers making White Lead by quick process, comparative painting tests, carefully and honestly made, show that Pure White Lead made by the "old Dutch process" will cover more surface and cover it better than White Lead made by the quick or so-called "up-to-date" process.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also folder showing picture of house painted in different designs or various styles or combinations of shades forwarded upon application to those intending to paint. National Lead Co., 100 William St., New York.

fruit as an article of food for the family. The force of the desire for a home supply of fruit is seen from the efforts men will put forth to obtain it. On the farm and in the towns the orchard-planting has been scarcely second to the house-building.

Laudable as the ambition is, efforts have often failed to produce the results hoped for. The trees die, and dead and dying trees discourage the planting of living ones. Obstinate difficulties have come up in the way of fruit-growers, until the indifferent have given up and the enthusiastic have sometimes become disheartened at the prospect.

But in the face of this, there is yet ground for hope and occasion for further trial. Ordinary means and methods have not met the conditions, but other means and methods may do so. One difficulty that is working strongly against good home orchards is that of getting reliable varieties, in good condition, at the right time and at reasonable rates. It seems wise, as a remedy for this difficulty, to turn more attention to home propagation. The processes are not difficult, and in many portions of the State there are abundant reasons for making the attempt.

1. Many sections of the State are without good nurseries. Not only the distance, but poor shipping connections, distance from railroads, lack of acquaintance with nurseries and nurserymen, and lack of acquaintance with suitable varieties for planting, all operate against the starting of successful orchards.

2. In every community some varieties come into prominence because of their good qualities. They may be known varieties. If so, well and good. They may be ordered and probably obtained from the nursery. However, it is often the case that the good fruit is from an unknown variety or a seedling. When this is so, reason would suggest that the stock be propagated in the home, and from home to home as far as its usefulness extends.

3. Again, the risk of mistakes in varieties that the buyer takes when he orders trees, is a point that must be considered. While nurserymen usually strive to reduce this risk to the minimum, it always exists, as many a buyer can testify. It is a bitter disappointment when a tree that has taken money, time and care proves itself at last inferior or worthless. By budding and grafting at home the risk of such mistakes can be eliminated. The grower may know from the start what manner of tree to expect.

4. Communities that depend upon agents for their stock are frequently shamefully treated and mercilessly swindled. The nurserymen of Kansas, as a class, are honorable and trustworthy men. It is through no design of theirs that people are defrauded, but there are agents that practice over the State, selling at exorbitant rates and caring nothing as to the quality of the stock or attention in delivery. It is right to interfere with the wrongful practices of these men. The growing of one's own stock gives a pleasant alternative to dealing with them.

5. It will be well to take up the propagation of fruits because of the good results that will come from it incidentally. With extra attention new interest will awaken; increased interest will bring out variations and new types that will be the parentage of better varieties in the future.

6. It would seem that the same spirit that moves a man to plant an orchard at all would prompt him to plant care-

fully to secure the best results from it. It is not fruit simply, but the best fruit, and that by the most practical methods. The fruit that satisfies best the demands of the home where it is grown is the kind most needed, and it is to be most easily secured by home propagation.

This system is not only desirable; it is practical. Good seeds are abundant; seedlings are easily grown; budding and grafting are simple processes, requiring little time and expense; the growing of stock till time for transplanting involves no more attention and skill than any good man who is interested in his business is able and willing to give.

Believing that this work will stimulate the fruit interests of the State and add a valuable feature to them, the Horticultural Department of the Agricultural College will furnish during the year all information necessary for the successful growing of seedlings and for budding or grafting them with such varieties as may be desired. Correspondence is invited, and any point not covered in the articles in the Kansas Farmer will be answered by letter upon inquiry. W. L. HALL, Assistant Horticulturist, Experiment Station, Manhattan, Kas.

The victory rests with America's greatest medicine, Hood's Sarsaparilla, when it battles against any disease caused or promoted by impure or impoverished blood.

Hood's Pills are the favorite family cathartic. Easy to take, easy to operate.

Excursion to Boston. The Nickel Plate road will sell excursion tickets from Chicago to Boston and return for trains September 16, 17 and 18, inclusive, at rate of \$19 for the round trip. Tickets will be valid returning until September 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. 58

Have You Read These Books? They are devoted to the wonderful sights and scenes, and special resorts of tourists and health-seekers, in the GREAT WEST. Though published by a Railway Company, THE SANTA FE ROUTE, they are literary and artistic productions, designed to create among travelers a better appreciation of the attractions of our own country. Mailed free to any address on receipt of postage, as indicated: "A Colorado Summer," 50 pp., 80 illustrations. 3 cents. "The Moki Snake Dance," 56 pp., 64 illustrations. 3 cents. "Grand Canon of the Colorado River," 32 pp., 15 illustrations. 2 cents. "Health Resorts of New Mexico," 80 pp., 31 illustrations. 2 cents. "Health Resorts of Arizona," 72 pp., 18 illustrations. 2 cents. "Las Vegas Hot Springs and Vicinity," 48 pp., 39 illustrations. 2 cents. "To California and Back," 176 pp., 176 illustrations. 5 cents. W. J. BLACK, G. P. A., A., T. & S. F. Railway, Topeka, Kas.

In the Dairy.

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

KEEPING MILK WITHOUT ICE IN SUMMER.

TWELVE HOURS.

It does not require much skill to keep milk twelve hours, yet our creameries are sometimes compelled to reject it on account of being sour. Because twelve-hour milk will usually be accepted at the creamery without having received much care, is no reason why we should neglect it. It is possible the butter-maker can manufacture a fair quality of butter from milk carelessly handled, but it is also possible for him to make a much better quality from milk carefully handled. The better the quality of butter the better price it will bring on the market, and likewise the patron will receive more for his milk. Every patron should realize that it is to his interest as well as that of the creamery to have his milk delivered in the very best possible condition—that is, free from dirt and with as few germs as possible. The results of a test of keeping milk twelve hours are referred to in the last issue of the Kansas Farmer.

TWENTY-FOUR HOURS.

Inquiries at creameries reveal the fact that during the summer a great many patrons do not attempt to deliver twenty-four-hour milk. They seem to take it for granted that it will not keep, and either feed it or make it into butter. Our experience at the Agricultural College goes to show that if milk be properly handled there is no difficulty in keeping it twenty-four hours. We have set it into a pit in the ground, placed it in a tub of well water, and immersed it in a barrel of well water, and in each case the milk has been sweet and in good condition. The following table gives a comparison of the three methods:

METHOD.	Beginning of Experiment.			End of Experiment. 24 Hours.	
	Temperature.	Acidity.	Number Bacteria Per c. c.	Acidity.	Number Bacteria Per c. c.
Barrel	62°	.194	132,238	.194	1,861,300
Tub	62°	.189	132,238	.199	4,933,200
Pit	62°	.194	132,238	.199	27,916,000

From the above table it will be seen that there was very little difference in the percentage of acidity of the different lots. Notwithstanding the small increase of acidity, we have found that we could not keep milk in the pit much over twenty-four hours. After reaching a certain stage milk sours very rapidly, and milk that is kept in a pit whose temperature is from 66° to 69° reaches that stage between twenty-four and thirty-six hours. It will also be seen that the milk in the pit contained by far the largest number of bacteria, but, judging from the acidity test, they are largely other than lactic acid bacteria. To keep milk twenty-four hours, then, cool down as soon as possible after milking to 60° or 62° and place the can in a pit, or surround with cool well water in a tub or barrel.

THIRTY-SIX HOURS.

This requires considerable more pains, but it can be done without great difficulty if the proper precautions are taken. Every dish used in handling the milk should be thoroughly scalded and the milk cooled as soon as possible after being drawn. It is not enough to simply cool the milk and set the can in water unless it be running water. There must be some provision for keeping the water cool. We have accomplished this by setting the can of milk in a tub of cold water and covering both over with wet gunny sacks. Evaporation from the surface would tend to keep things cool, and by changing the water twice a day milk could be kept thirty-six hours except on a very few of our very hottest days, when it was necessary to have the tub or tank packed in chaff or sawdust and special pains taken to have the top well closed.

FORTY-EIGHT HOURS.

It is seldom that one would care to keep milk forty-eight hours, but the college has tried it to see if it could be done. But if any one fails to keep milk thirty-six hours (over Sunday) by the method described above, it would be well for him to try the method we use in keeping it forty-eight hours. The process is as follows: After the milk is aerated and cooled to 60°, it is placed in a New York can, where the cover reaches down over the top of the can

and thus allows the whole can to be immersed in a barrel of cold well water. Surrounding this barrel is four inches of chaff. Outside this chaff is an air space of four inches and then another four-inch layer of chaff. This gives it the appearance of a box within a box, and necessitates two covers, one for each box. Both of these covers are lined with a layer of chaff supported by gunny sacks. There are two short pieces of hose that connect from the outside to near the top of the barrel. One of these hoses is an inlet for fresh water and the other is an overflow pipe to tell when the barrel is full. The latter also serves as a channel through which the wire or string connects with a valve in the bottom of the barrel, to let out the warm water. These passages are plugged up when not in use. The following table gives the data on milk kept forty-eight hours:

DATE.	Beginning of Experiment.			End of Experiment. 48 Hours.	
	Temperature.	Acidity.	Number Bacteria Per c. c.	Acidity.	Number Bacteria Per c. c.
August 8...	61½°	.178	264,578	.521	47,500,000
August 10...	64°	.204	461,100	.367	62,112,000

It will be noticed that the acidity and number of bacteria do not always agree; when the acidity only shows the presence of lactic acid bacteria and does not take into account the hosts of other bacteria that may or may not be present.

It should be noted that all the methods described above are under farm conditions, and no doubt many farmers have advantages far superior to ours, especially those who have running spring water. It is possible for any one who has well water at his command to keep his milk from thirty-six to forty-eight hours.

D. H. O.

Alfalfa vs. Shrinkage in Milk.

Alfalfa vs. Shrinkage in Milk.

It has been the practice at the Agricultural College to give the dairy herd while on pasture an average of three pounds grain daily, composed of four parts corn meal and one part bran. The thirty head have also had access each day to 200 pounds of rather poor ensilage, of which they would eat about 140 pounds. During the hot dry spell, which began in the early part of July, we fed in addition all the alfalfa hay the cows would eat. We kept an accurate account of the milk yield and the amount of alfalfa eaten, the average results of which are given in the following table, together with a comparison of the cows of eight patrons who deliver milk to the Manhattan creamery, but who give their cows no extra feed during the dry period. On the first line of the table are given the average daily yields per cow for three weeks previous to the dry period, which serve as a basis from which to figure the shrinkage:

WEEK ENDING	College Herd, 30 Cows.			Average of 8 Patrons, 55 Cows.	
	Alfalfa Eaten Daily per Cow, Pounds.	Average Daily Yield per Cow, Pounds.	Daily Shrinkage per Cow, Pounds.	Average Daily Yield per Cow, Pounds.	Daily Shrinkage per Cow, Pounds.
June 21 to July 5	.....	18.42	.....	12.67	.....
July 12	1.83	18.66	.....	11.38	1.29
July 19	2.60	19.04	.....	11.25	1.41
July 26	3.00	18.89	1.53	9.61	3.06
August 2	5.40	16.78	1.64	8.84	3.83
August 9	8.76	16.42	2.00	8.10	4.57
August 16	5.60	17.59	.83	7.71	4.96

From the above table it will be noticed that the average yield of the college herd is somewhat above the others. This is doubtless due to the extra feed these cows receive. It will also be seen that the average shrinkage of the patrons' cows is from two to four pounds daily per cow more than that of the college herd, and that this shrinkage is increasing while that of the college is beginning to decrease.

It will be noted that the table gives only averages. From the individual records, we find that in some cases the shrinkage was as high as nine and a half pounds (four and a half quarts) daily per cow. It should be borne in mind that when a cow once shrinks in her milk it is very difficult, if not well-nigh impossible, to restore her to her former capacity. Just at this time, when the pastures are getting dry, a little alfalfa hay, or if that be impossible, a little extra grain or some green corn fed the cows will pay a dairyman a rich profit. The Chicago Produce reports a case of a man realizing \$60 an acre for his corn when fed in this way. We must

be in mind that it is not how little we can feed a cow but how much she can digest and assimilate that determines the profit.

D. H. O.

To Kansas Butter-Makers.

It is gratifying to know that Kansas is taking the lead in the number of tubs exhibited at the Omaha Exposition. Although we have not yet received the premium for the highest score, we should not feel in the least discouraged. Kansas is going to be the best dairy State in the Union. If we expect Minnesota, Wisconsin or Iowa to carry off all the prizes, they will; but if we go into the contest with a determination that Kansas must win, there is no reason why we cannot hold our own with any State. Lift up your heads, ye Kansas butter-makers. Study to make your butter the best, and then enter the contest with a determination that the closing months of the Trans-Mississippi and International Exposition shall be freighted with laurels for Kansas butter.

A Guide in Purchasing Feeds.

This is the time of year when dairy-men are planning what they will feed next winter. More or less of the grain feeds will have to be bought, and inquiries are coming in as to what would be the cheapest. Of the different elements of nutrition, protein is by far the most expensive, and we need to know something of the relative values of our different feeds with protein as a basis. True, protein is not the only element to be considered, but it is the principal one; the others are readily supplied on the farm. For the benefit of those who have to buy their feed and want to know their relative protein value, the following table has been constructed:

COMPARATIVE VALUE OF FEED-STUFFS.

Grains.	Protein as a basis.		
	Value per bushel or ton when corn is worth:	15 cts.	20 cts.	25 cts.
Oats	\$.12	\$.16	\$.20
Wheat .....	.23	.31	.39
Wheat bran	10.71	14.28	17.85
Wheat middlings	10.37	13.82	17.28
Wheat shorts	9.86	13.14	16.43
Sorghum seed	1.18	1.22	1.27
Soy beans .....	.75	1.00	1.25
Linseed meal (O. P.)	24.05	32.07	40.09
Cottonseed meal	31.36	41.82	52.27
Chicago gluten meal	27.37	36.49	45.61

Hays and Roots.	Value per ton when prairie hay is worth:		
	\$2.00.	\$3.00.	\$4.00.
Alfalfa	\$6.04	\$9.07	\$12.09
Red clover	3.76	5.64	7.52
Orchard grass	2.73	4.09	5.46
Timothy	1.65	2.47	3.30
Millet	2.57	3.85	5.14
Sorghum hay	1.18	1.77	2.36
Corn stover	1.13	1.70	2.26
Oat straw .....	.90	1.35	1.80
Wheat straw .....	.45	.68	.91

Mr. J. Branscom, of Meriden, Kas., has taken sufficient interest in his small herd of six cows to have them tested individually. Two of his best cows have been receiving three pounds of bran and one and one-half pounds of oil meal daily per head in addition to good clover pasture. He finds that these cows yield him daily one gallon (8.6 pounds) more milk per head when fed this grain than when left on pasture alone. These cows test 3.6 or 4 per cent. butter fat respectively. Mr. B. is now inquiring if it pays him to give his extra grain ration when butter fat is worth 14½ cents per pound, bran \$7.50 per ton and oil meal \$1.25 per hundredweight. The extra gallon of milk yields Mr. B. 306 and 344 pounds butter fat, respectively, or a total of .65 pound per day, which, at 14½ cents, amounts to 9.42 cents. Six pounds of bran will cost 2.25 cents and 2½ pounds of oil meal 3.12 cents, making a total cost for the grain of 5.37 cents per day. Subtracting from 9.42 cents and there remains 4.05 cents as profit. In other words, the grain that Mr. B. is feeding brings him a daily profit of over 2 cents per cow.

D. H. O.

'ALPHA-DE LAVAL' CREAM SEPARATORS.



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

THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS., CHICAGO. | 74 CORTLAND STREET, NEW YORK.

Do You Intend Moving?

Why not investigate southwest Missouri, southern Kansas, northwest Arkansas, Indian Territory or the Texas coast country? The manufacturing, farming and stock raising industries of these sections are attracting considerable attention. The chief centers are reached via the Frisco line. For ticket rates and full particulars, address Geo. T. Nicholson, Gen'l Pass. Agt. St. Louis, Mo.

Nickel Plate Excursion to Boston.

Tickets on sale for trains leaving Chicago September 16 to 18, inclusive, at rate of \$19 for the round trip, and good returning until September 30. Also cheap rates to all points east. Vestibuled sleeping cars to Boston, and solid trains to New York. Rates lower than via other lines. For further information, call on or address J. Y. Calahan, General Agent, 111 Adams St., Chicago. 61

The Continental Limited

Is the name of the new fast train just put on the Wabash, running through to New York and Boston. The time is the fastest ever made by a high standard, wide vestibuled limited train.

Sleeping car accommodations can be secured through to New York and Boston at the Wabash ticket office, northwest corner Ninth and Delaware street, or wire to HENRY N. GARLAND, Western Passenger Agent, Kansas City, Mo.

Tours in the Rocky Mountains.

The "Scenic Line of the World," the Denver & Rio Grande railroad, offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the trans-continental traveler the grandest scenery. Two separate and distinct routes through the Rocky mountains, all through tickets available via either. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman sleepers and tourists' cars between Denver and San Francisco. The best line to Utah, Idaho, Montana, Oregon and Washington via the "Ogden Gate way." Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.

BEARDED FIFE...

OR RELIABLE MINNESOTA WINTER WHEAT.

The only hard Winter Wheat, equal to the No. 1 Hard Fife Spring wheat for milling. We grow it here in Minnesota and it will not freeze out or winter-kill anywhere, and can always be depended upon to make a safe and sure crop. We will send a sample of this great wheat also our catalogue FREE and full particulars to all farmers. Write to-day. Prices reasonable. Farmer Seed Company, Farmers and Seed Growers, Fairbault, Minn.

LEADING SCHOOL IN DENVER, MINN. SURROUNDING MANASSA AND WASHINGTON

Cheap Rates. Lessons by Mail. Good Positions. Elegant Catalogue Free. Address L. H. Strickler, Topeka, Kas.

The Improved U. S. Cream Separators

In thoroughness of separation take the lead. In completeness of design and ease of operation excel all others.

Are more substantially made and are superior in all points to all others.

All Styles and Sizes. \$75.00 to \$625.00.

Agents in all dairy sections.

Send for latest illustrated catalogues.

VERMONT FARM MACHINE CO., - Bellows Falls, Vt.

Gossip About Stock.

J. C. Leach, Carbondale, Kas., is fitting up a herd of Duroc-Jersey swine to show at the Osage County fair.

Walter Roswurm, of Beman, Morris county, has a splendid lot of Poland-Chinas, to the number of sixty-two head, some of which he thinks are regular "cracker-jacks."

Next week, on Tuesday, the regular Poland-China sale takes place at Fort Scott, Kas., when over sixty head, consigned by Messrs. Adamson, Turley, Young and Hornaday, will be sold to the highest bidder.

E. T. Warner, Princeton, Kas., proprietor of the Franklin County herd of Poland-China swine, writes that his pigs are coming along in fine shape and that the corn prospect is excellent, which is quite encouraging for the hog-raiser.

As an evidence of improved conditions among the farmers and their confidence in good stock as an investment may be mentioned two small sales of improved stock cried recently by Geo. W. Barnes in western Shawnee county netted several hundred dollars more than the estimate made previously by the owner.

A. F. Russell, of Fillmore, Mo., made a very good showing of Duroc-Jersey swine at the St. Joseph fair, last week. He reported splendid sales. The writer noted two splendid sales of a trio of pigs, consisting of a young boar and two gilts, one lot to Sam'l Detwiler, Hiawatha, Kas., and the other to E. M. Ware, St. Joseph, Mo.

In our issue of August 18 we endeavored to correct the mistake which was made in our list of public sales. Messrs. Blair, McDonald and Wampler will hold a Poland-China sale at Girard, on September 28, while in our claimed list of sales it is

should be a large attendance of breeders. The success of this sale in the "Big Seventh" Congressional district will be of considerable future importance to every breeder in southwestern and central Kansas. Send for catalogue now.

W. S. James, President of the Cloud County Live Stock Association, Concordia, Kas., this week advertises to receive bids until September 15, on some very fine Jersey cows. He says: "One of the cows, Daisy Douglass 121215, traces to St. Heller 45, Le Brocque's Prize, Marius and Bertha Landseer 26796 and out of Alberta Micawber 66659, Alpheon Micawber out of Alpheus Belle 27194, test five and one-half pounds butter in one day, thirty-three pounds in seven days. Signable Landseer traces to Landseer's Fancy. Two of the cows and two of the heifers are out of these cows and by my old bull, C. Silver King 47076, who has proven himself a grand good sire. The cattle are all good colors as you know."

At no time since Mr. W. H. Wren, of Marion county, began his career as a breeder of pedigreed Poland-Chinas has he been able to turn off at a public sale the equal of those that will be sold on Wednesday, September 14, in the city of Marion. No. 1, What's Wanted Wilkes, whose grandsires were What's Wanted 10030 S. and Guy Wilkes 2d 1777 S. and his granddams Mollie K. 23402 by M's Tecumseh 4430 S. and Annie S. 51650 A. by Cedar Corwin 10791, ought to be considered breeding good enough to go anywhere and please the most fastidious of Poland-China breeders. Individually he is a plumb good one and as a sire he has proven himself a getter of extra good ones. No. 2, Sensation I Know by Chief I Know 11992 S. and out of Corwin's Sensation (42768), backed by Corwin U. S. and One Price, is certainly breeding that all up-to-date breeders would want. Individually she is a sure handsome sow and would show very favorably in any State fair ring. In the pedigree of No. 3 of catalogue is a line of very acceptable breeding

from Admiral Sampson's flagship, the New York. Together the two papers give a complete and most vivid account of what was undoubtedly the most picturesque event of all the war; and being illustrated with portraits of all the commanders, pictures of all the ships, and views of all the wrecks, largely from photographs taken by the authors, they leave nothing to be desired.

We have just received from Harold Sorby, of Chicago, a valuable pamphlet upon blackleg and its prevention by the Pasteur system of vaccination. This pamphlet contains in a concise and interesting form much that a stockman desires to know about blackleg, its treatment and prevention; and shows that blackleg can be cheaply and easily prevented by vaccination. These claims are founded on facts supported by the testimony of thousands of American cattlemen who have been vaccinating their stock during the last two or three years. We can readily understand that millions of dollars have been saved by using the Pasteur vaccine, and "money saved is money made." A copy of this pamphlet should be in the hands of every cattleman; it can be obtained gratis by writing to the Pasteur Vaccine Co., Chicago, and mentioning this paper.

The United States' Bee Keepers' Union has decided to hold its next convention at Omaha, and an effort is being made to have it held September 7, 8 and 9, which are the dates set for the National Pure Food Congress to be held at Omaha. Mr. E. Whitcomb, Superintendent of the Bureau of Bee Industries, is in hopes that the Bee Keepers' convention may be held at that time, as he says the Bee Keepers' Union is working along the same lines and in harmony with the Pure Food Congress, and it is believed that reduced railroad rates may be more easily obtained at that time.

EDUCATE FOR BUSINESS. We offer best facilities. Commercial, Shorthand, Telegraph, Typewriting, Penmanship. Eighteenth year. Good board \$1.85 per week. More calls for graduates than we could supply. Train here and now. Elegant two-colored "Cold Facts Budget" free. Add. Emporia Business College, Emporia, Kas.

BELGIAN HARES FOR SALE. Choice young, and breeders (first-class stock). The meat of the Hare is pronounced by epicures the best in the market, edible all the year. Will sell cheaper than the cheapest. Address SIMONS BELGIAN HARE CO., 717 N. 5th St., Kansas City, Kas.

150 Poland-Chinas at Private Sale. Fifty extra fine sows bred; twenty-five fashionable gilts; twenty-five selected young boars and fifty choice spring pigs, both sexes. Hard boars, Wren 17172, Duke Weston 18974, and Eberly's Model 18982. It will pay you to see this herd before buying. J. W. HIGGINS, Jr., Hope, Kas.

G. A. R. CINCINNATI, O. September 5-10. For the annual encampment of the G. A. R., at Cincinnati, O., in September, the Union Pacific will make the greatly reduced rate from Topeka of \$16.10 for the round trip. Be sure your ticket reads via the Union Pacific.

For time tables and full information call on F. A. Lewis, City Ticket Agent, or J. C. Fulton, Depot Agent, Topeka.

GRIND YOUR GRAIN AT HOME and save the toll. You have the horses, we have the power and mill. Over 20,000 PEERLESS Mills are now in use. They work fast, fine, easy. Make family meal or feed. Prices, \$15, \$18, & \$20. AGENTS WANTED EVERYWHERE. Write for circulars and agency. STEVENS MFG. CO. Box 18, Joliet, Ill.

FACTORY TO FARM THE ADVANCE WOVEN WIRE FENCE is sold only direct to the farmer—freight paid. That saves him the dealer's commission and we give him a fence that is cheap and better than the use of any hand fence machine made. THERE CAN'T BE A BETTER FENCE made for the money than this one. Prices way down. One small order will satisfy you on this point. Don't buy until you get our extra special discount to farmers. ADVANCE FENCE CO., 1801d St., Peoria, Ill.

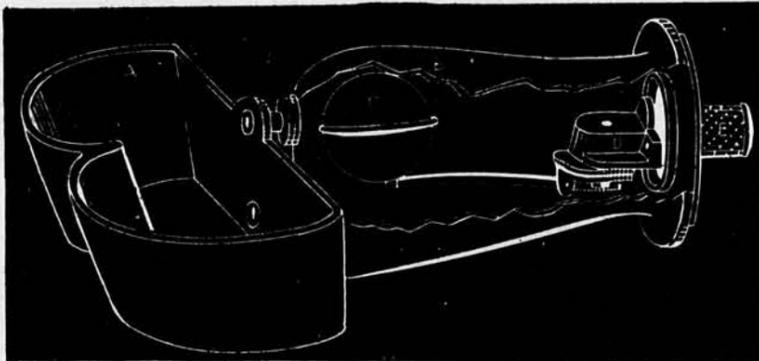
JUDGE ZIEGELASCH Pronounces sentence on The Farmer's Friend! This is to certify that I have used Seelye's Wasatusa in my family for two years and WILL NOT BE WITHOUT IT. I heartily recommend it to any person. W. M. ZIEGELASCH, Probate Judge, Junction City, Kas. H. Hensley, of the firm of Hensley & Masterson, wholesalers, St. Joseph, Mo., writes: "I need Wasatusa and hope you will ship at your earliest convenience one dozen bottles. I am out of it entirely, and as it seems MY LIFE ALMOST DEPENDS ON IT you will greatly oblige me by shipping as promptly as possible. I need it for kidney trouble." Another writes that his daughter WAS THROWN INTO A BARBED WIRE FENCE from a horse, badly cut, and WASATUSA THE GREAT HEALER healed all lacerations nicely and SAVED \$500 DOCTOR BILLS. Wasatusa stands without an equal as a Healer and Quick Pain Remover, internally and externally, in man or beast. Try it. A safe remedy for every home in America. Insist on your druggist getting it from the wholesaler for you. Price 50 cents and \$1 per bottle, or address DR. A. B. SEELYE MEDICINE CO., ABILENE, KANSAS. WASATUSA, the Great Healer, successfully cures Rheumatism, Colic, Cramps, Sprains, Cholera Morbus, Accidents, Summer Complaint, Diarrhea, Headache, Catarrh, LaGrippe, Neuralgia, Scalds—pain of all kinds, no matter where or by what name known. ASK YOUR GROCER FOR Dr. Seelye's Flavoring Extracts. Triple strength. The best on the market.

20 BUSHELS MORE PER DAY is what you can husk and save your hands by using Kees Improved Corn Husker. See your dealer or sent postpaid on receipt of 50c. (No stamps.) Address, F. D. KEES, Beatrice, Neb.

Giant Killer... Duplex Grinder. A BIG MILL ON A BIG BOX. Roller Bearings. 3,000 Sold Last Season. IMMENSE CAPACITY. Equal to a 25-inch double-gear machine. No gearing to bind or break. All power applied direct to duplex burrs. Double auger force feed and steep cone. Corn and cob will not lodge or "hang up" in hopper. Warranted under like conditions to grind one-third more than an 18-inch double-gear mill, and furnished with a feed-box in proportion to capacity. Write DAVIS GASOLINE ENGINE WORKS CO., Waterloo, Iowa. We ship from Omaha, Neb.; Kansas City or St. Louis, Mo.; Bloomington, Ill.; Indianapolis, Ind.; Minneapolis, Minn.

GOODHUE Self-oiling, Best Governed, Acknowledged to be the most powerful and durable made. We have everything the farmer needs in this line. Towers, Tanks and Pumps, Cutters, Grinders, Shellers, etc. POWER AND PUMPING MILLS Catalogue, full of valuable points, free. Appleton Mfg. Co. 18 Fargo St. BATAVIA, ILL.

LIGHTNING WELL MACHY IS THE STANDARD STEAM PUMPS, AIR LIFTS, GASOLINE ENGINES WRITE FOR CIRCULAR 19 THE AMERICAN WELL WORKS AURORA, ILL. - CHICAGO - DALLAS, TEX.



THE DEWEY AUTOMATIC STOCK FOUNTAIN.

Readers will note the change in the advertisement of the Stock Fountain Co., of Lake City, Iowa. They now present the latest float fountain put on the market. Pure water is an assistant safeguard against cholera, and the bountiful supply of it increases fat and lessens the quantity of food required. Pure water is furnished by the Dewey fountain, manufactured by the Stock Fountain Company, of Lake City, Iowa. It has handled every combination of fountain made, and for two years has been noting all of the objections to the usual float fountain, and has now overcome all the objections in the Dewey. It was invented early this season, placed on the market recently, and has given such unbounded satisfaction that it has excluded the sale of all others. It is placed on the market under the company's usual guarantee as noted on page 13. This company will send one on trial, express prepaid, to be settled for when found satisfactory. You may keep the fountain after trying it, and remit the retail price, or return it to the express office, as you please. The guarantee means something, and it should be tried by all stock raisers. The objections to float fountains in the past have been, viz.: Wooden floats which soon water log, become heavy and keep the valves open; float partitions between drinking cups, allowing mud to accumulate under float, which holds it up and shuts the water off. The valves of the usual float fountains are just over the floats, outside

of the body of water, and freeze readily. Mud cannot be cleaned from under them unless the entire fountain is taken apart. These objections are overcome in the Dewey, besides many minor ones not mentioned. It has a double drinking cup, and a brass float which will not rust or water log, and valve that cannot freeze, as it is eight inches within body of water. You can use the fountain the entire winter. Mud cannot get under the floats. Dealers and farmers all want a fountain if they can purchase a perfect one. The Dewey is a perfect one. Hog cholera is now gaining ground again, and it is frequently in pens where impure water is furnished. A farmer at Lake City, Iowa, who raises from 200 to 300 hogs a year, and is now using the Dewey fountain, states that every year he lost a number of pigs, and he knew it was from not being watered regularly. They were always hot and feverish, due to not having plenty of water. As soon as he obtained a stock fountain his pigs commenced to thrive, and he has never lost one since from any disease. Many thousands of farmers will testify to the same, and the company will furnish you any number of addresses to whom you may write to verify these remarks. Address the Stock Fountain Co., Lake City, Iowa, on this subject, obtain their circulars, and demonstrate this matter conclusively before investing any money, which you can do by trying the fountain and not paying for it unless satisfactory.

mentioned as the sale of Wilkie Blair, Poland-Chinas and Red Polled cattle, Beulah, Kas. The page containing the claim dates of sales had already been printed for this week before the fact was called to our attention that we had not corrected the list as we intended to do in accordance with an item in the "Stock Gossip" of August 18.

About ten days ago, ex-Governor Glick, proprietor of the famous Shannon Hill herd of Short-horn cattle, was at the Kansas Farmer office, and was feeling rather depressed on account of losses which he had just sustained, amounting to some \$2,000 worth of fine young animals, from blackleg. The writer was pleased to learn from Governor Glick at that time that he had arranged to have his animals vaccinated, in the hope of preventing further loss. The news dispatches from Atchison give the cheerful information that after treatment with the Pasteur vaccine no more losses occurred.

Mr. Thos. H. Foley and S. W. Hill will hold a very important sale of Poland-China swine at Hutchinson, Kas., during the latter part of September. The offering will be desirable and will include the entire Superior herd of Poland-Chinas, owned by Thos. H. Foley, consisting of fifteen aged sows, fifteen yearling sows and about thirty pigs of both sexes and the herd boars, Gen. Hidestretcher 19211 and Princeton Chief 14543 and the young boar Hadley Corwin Faultless, a full brother to Harry Faultless Corwin of Elm Beach farm. Mr. S. W. Hill will include a draft of about thirty head sired by the prize-winning boar, Guy Darkness 18292 and Best Nims 19612, bred by W. M. Lambing, of Iowa. Owing to the size and quality of the offerings there

in the commingling of Klever's Model and Longfellow. Here is a kind of an all-round combination animal—a show and mammy sow. If she were out in full show ring dress she would be sure to reach a short list for final inspection. There are three of a litter of six by Capper 19121 S., he by What's Wanted Jr. 10028 S. and out of Rosa Nell 6th (49341), she a granddaughter of the \$555 Hadley Jr. 13314 S. One of these three is a very fancy young boar that ought to go to some one that would take pride in growing out a finely-bred and promising youngster. Thus it goes on through the catalogue. A major portion of the brood sows will have litters at side, which will afford an opportunity to buy a herd starter at once. Keep in mind the date—Wednesday, September 14.

Publishers' Paragraphs.

Farmers needing any kind of handy tools for repairing the many articles constantly needing "fixing" on the farm, should notice advertisement of Bloomfield Manufacturing Co., of Bloomfield, Ind., and write them for catalogue.

In McClure's Magazine for September, Mr. George E. Graham describes the destruction of Admiral Cervera's fleet, as he himself had the good fortune to see the work done from Commodore Schley's flagship, the Brooklyn; and Mr. W. A. M. Goode describes it as he too saw it,

The Veterinarian.

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

ABNORMAL POSITION OF PASTERNS.—Would you please tell me what can be done, if anything, for a suckling colt whose feet are malformed, the pastern joint being bent out of the straight line to the outside? Are there any boots made which will correct this, or what shape can they be made that will correct it?
J. C.

Selbert, Col.
Answer.—Skill, time and patience could no doubt correct these "malformed" feet; but whether, in the end, this would be desirable, is very questionable. The peculiar outward position of the pasterns was no doubt intended by nature to counteract a peculiarity of an opposite nature in the upper part of the limb. Horses that are narrow-chested or knock-kneed usually have such pasterns. As they get older nature often corrects this position to a certain extent. Such pasterns are no particular disadvantage, aside from marring the good appearance of the animal and that such animals are predisposed to interfere. Care must, therefore, be exercised in shoeing such animals and in trimming or paring their hoofs. When moving rapidly such horses throw dirt or mud up under their body. Horses with pasterns running inward throw the mud up and out. If the feet are actually deformed I would destroy the animal.

INFLAMED SHEATH IN BOARS.—When two or three of our last year's boars make water a part of it is retained in the end of their sheaths, forming large sacks. By squeezing them the water will come out. They are very sore and feverish. One of them has a considerable amount of blood passing. We have been giving U. S. condition powders, carbolic acid and coppers. What more would you advise?
D. AND S.
Richmond, Kas.

Answer.—Evacuate the sheath of its contents by manipulating with your fingers. If the external opening is constricted, enlarge it with a downward stroke of a sharp, clean knife; syringe the cavity with a 4 per cent. solution of boracic acid in water, until every trace of pus has been removed, and then apply to all the inflamed or sore parts a small quantity of carbolized vaseline. Repeat this operation twice every day, paying special attention to cleanliness of the parts. Pay particular attention to the hog's diet. Give easily digestible nitrogenous food, in slop form. If hogs are constipated, give each one or two ounces of castor oil in a pint of sweet milk. Discard condition powders and other remedies.

THE STRAY LIST.

FOR WEEK ENDING AUGUST 18, 1898.

Linn County—C. O. Hoag, Clerk.
STEER—Taken up by L. J. Brough, Centreville township, July 14, 1898, one red and white yearling steer, under-bit in left ear; valued at \$20.
Montgomery County—D. S. James, Clerk.
MARE—Taken up by M. Suey, in Drum Creek township, May 17, 1898, one gray mare, about 9 years old, about fourteen and a half hands high, black mane and tail, scar on left cheek.
PONY—By same, one bay pony, about 6 years old, about fourteen hands high, bluish on right side the two animals valued at \$50.

FOR WEEK ENDING AUGUST 25, 1898

Cowley County—S. J. Neer, Clerk.
HORSE—Taken up by J. C. Sulton, in Ninnescah tp. (P. O. Seely), July 20, 1898, one dark bay horse, medium size, star in forehead; valued at \$20.

FOR WEEK ENDING SEPT. 1, 1898.

Labette County—E. H. Hughes, Clerk.
MARE—Taken up by O. E. Harmon, in Richland tp. (P. O. Chetopa), July 24, 1898, one dun mare, 10 years old, fourteen hands high, no brands or marks; valued at \$10.
MARE—By same, one gray mare, about 5 years old, no brands or marks; valued at \$10.
MULE—By same, one dun mare mule sucking colt, about 4 months old, no brands or marks; valued at \$10.

Celebrated "Des Moines" Equalizers

Four Horses For Plows and Binders

No experiment. Ten years on the market. Thousands in use. Prices right. Descriptive matter, prices, etc., on application.
SPECIALTY MFG. CO., Des Moines, Iowa.

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

MARKET REPORTS.

Kansas City Live Stock.
Kansas City, Aug. 29.—Cattle—Receipts since Saturday, 6,248; calves, 223; shipped Saturday, 1,211 cattle; 231 calves. The market was generally 10c lower. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price.	No.	Ave. Price.
63.....	1,153 \$4.85	17.....	1,490 \$4.85
17.....	1,220 4.80	1.....	1,050 4.25
WESTERN STEERS.			
15.....	1,300 \$4.85	42.....	1,317 \$4.40
69 T.....	1,158 4.15	48.....	967 4.00
23 stk.....	709 3.70	40 fdr.....	1,124 3.70
39 fdr.....	954 3.65	22 T.....	951 3.60
NATIVE COWS.			
8.....	1,032 \$3.65	4.....	1,210 \$3.50
2.....	1,010 3.25	6.....	966 3.20
1.....	1,070 3.00	1.....	870 2.90
6.....	860 2.85	3.....	966 2.15
NATIVE FEEDERS.			
1.....	1,090 \$4.25		
NATIVE STOCKERS.			
5.....	414 \$4.85	12.....	516 \$4.80
1.....	470 4.40	5.....	734 4.00
35.....	827 4.05	8.....	871 3.75
12.....	710 3.65	8 J.....	433 2.75

Hogs—Receipts since Saturday, 2,562; shipped Saturday, 798. The market ruled steady to strong. The following are representative sales:

61.....	299 \$3.87 1/2	91.....	201 \$3.85	58.....	275 \$3.85
30.....	227 3.82 1/2	72.....	266 3.82 1/2	77.....	220 3.82 1/2
59.....	265 3.82 1/2	65.....	218 3.80	77.....	215 3.80
65.....	241 3.80	55.....	234 3.80	69.....	202 3.80
72.....	243 3.80	80.....	203 3.80	64.....	233 3.80
56.....	288 3.80	65.....	244 3.80	15.....	214 3.80
83.....	209 3.75	17.....	258 3.75	36.....	252 3.75
6.....	231 3.75	17.....	193 3.75	62.....	241 3.72 1/2
39.....	209 3.75	37.....	249 3.70	49.....	241 3.70
31.....	149 3.70	2.....	150 3.70	27.....	156 3.65
20.....	139 3.65	20.....	161 3.65	59.....	168 3.65
58.....	194 3.60	5.....	128 3.60	104.....	128 3.45
3.....	343 3.40	3.....	256 3.25	1.....	290 3.25
1.....	110 3.25	1.....	90 3.25	1.....	200 3.20
42.....	81 2.75	1.....	160 2.75	1.....	440 2.50

Sheep—Receipts since Saturday, 2,368; shipped Saturday, 1,819. The market was nominally steady. The following are representative sales:

12 N. lms....	81 \$5.50	54 stk. lms....	51 \$4.55
6 N. ewe....	133 4.25	1 N. ewe....	130 4.25
3 N. ewe....	116 4.15	1 N. ewe....	120 3.75
10.....	65 4.45		

St. Louis Live Stock.

St. Louis, Aug. 29.—Cattle—Receipts, 5,500; market 5 to 10c lower for natives and 10 to 15c lower for Texans within range; native shipping steers, \$4.60@5.05; light and dressed beef and butcher steers, \$3.70@3.35; stockers and feeders, \$2.00@4.50; cows and heifers, \$2.00@4.80; Texas and Indian steers, \$2.75@4.45; cows and heifers, \$2.65@3.50.
Hogs—Receipts, 1,800; market steady; yorkers, \$3.95@4.02 1/2; packers, \$3.85@3.95; butchers, \$3.90@4.00.
Sheep—Receipts, 2,500; market steady; native muttons, \$3.75@4.05; lambs, \$4.00@5.75.

Chicago Live Stock.

Chicago, Aug. 29.—Cattle—Receipts, 22,000; market generally 10c lower; beefs, \$4.00@5.60; cows and heifers, \$2.00@4.80; Texas steers, \$3.30@4.30; westerns, \$3.60@4.50; stockers and feeders, \$3.10@4.60.
Hogs—Receipts, 38,000; market weak to 10c lower; heavy weak; light, \$3.70@4.15; mixed, \$3.60@4.10; heavy, \$3.50@4.05; rough, \$3.50@3.65.
Sheep—Receipts, 17,000; good grades steady, others weak; natives, \$2.80@4.65; westerns, \$3.50@4.60; lambs, \$3.75@6.10.

Chicago Grain and Provisions.

	Aug. 29.	Opened	High'st	Low'st	Closing
Wh't—Aug....	63 1/2	68 1/2	68 1/2	68 1/2	68 1/2
Sept....	64 1/2	65	64	64 1/2	64 1/2
Dec....	61 1/2	62 1/2	61 1/2	61 1/2	61 1/2
Corn—Aug....	30	30 1/2	30	30 1/2	30 1/2
Sept....	30	30 1/2	30	30 1/2	30 1/2
Dec....	30 1/2	30 1/2	30	30 1/2	30 1/2
Oats—Aug....	19 1/2	20 1/2	19 1/2	19 1/2	19 1/2
Sept....	19 1/2	22 1/2	22	22 1/2	22 1/2
May....	22	22 1/2	22	22 1/2	22 1/2
Pork—Sept....	8 82 1/2	8 85	8 82 1/2	8 85	8 85
Oct....	8 82 1/2	8 82 1/2	8 82 1/2	8 87 1/2	8 87 1/2
Dec....	8 90	8 95	8 87 1/2	8 95	8 95
Lard—Sept....	5 12 1/2	5 17 1/2	5 07 1/2	5 17 1/2	5 17 1/2
Oct....	5 15	5 22 1/2	5 15	5 22 1/2	5 22 1/2
Dec....	5 20	5 27 1/2	5 20	5 27 1/2	5 27 1/2
Ribs—Sept....	5 20	5 32 1/2	5 20	5 32 1/2	5 32 1/2
Oct....	5 20	5 35	5 20	5 35	5 35
Dec....	4 87 1/2	4 97 1/2	4 87 1/2	4 97 1/2	4 97 1/2

Kansas City Grain.

Kansas City, Aug. 29.—Wheat—Receipts here to-day were 617 cars; a week ago, 538 cars; a year ago, 883 cars. Sales by sample on track: Hard, No. 1, 62 1/2c; No. 2 hard, 60@63 1/4c; No. 3 hard, 57@60c; No. 4 hard, 50@59 1/2c; rejected 50@58 1/2c; no grade, 55@56c. Soft, No. 2, nominally 67c; No. 3 red, 60@65c; No. 4 red, 60c; rejected, 50c. Spring, No. 2, 58 1/2@59 1/2c; No. 3 spring, 57c.
Corn—Receipts here to-day were 43 cars; a week ago, 37 cars; a year ago, 77 cars. Sales by sample on track: Mixed, No. 2, 26 1/2@27c; No. 3, nominally 26c; No. 4 mixed, 23c; no grade, nominally 23@24c. White, No. 2, 26 1/2@27c; No. 3 white, 26 1/2c; No. 4 white, 23c.
Oats—Receipts here to-day were 20 cars; a week ago, 24 cars; a year ago, 22 cars. Sales by sample on track: Mixed, No. 2, nominally

16 1/2@20c; No. 3 mixed, nominally 16@16c; No. 4 mixed, nominally 17@18c. White, No. 2, 21 1/2c; No. 3 white, 22c; No. 4 white, 20c.
Rye—No. 2, 89c; No. 3, nominally 87c; No. 4, nominally 86c.
Hay—Receipts here to-day were 73 cars; a week ago, 51 cars; a year ago, 85 cars. Quotations are: Choice prairie, nominally \$5.50@6.00; No. 1, \$5.00@5.25. Choice timothy, \$4.50; No. 1, \$5.75@6.00. Timothy and clover, No. 1, \$4.75@5.00.

Kansas City Produce.

Kansas City, Aug. 29.—Eggs—Strictly fresh, 11 1/2c per doz.
Butter—Extra fancy separator, 17c; firsts, 15 1/2c; dairy, fancy, 15c; store packed, 12c; packing stock, 10 1/2c.
Poultry—Hens, 6 1/2c; broilers, 9c per lb.; roosters, 15c each; ducks, 6c; young ducks, 6 1/2c; geese, 4c; goslings, 7c; hen turkeys, 7c; young toms, 6c; old toms, 6c; pigeons, 50c per doz.
Fruits—Grapes, 15@20c per peck. Peaches, 40@60c per 1/2 bu. Apples, 40@60c per 1/2 bu.
Vegetables—Roasting ears, home grown, 5c 6c per doz. Tomatoes, home grown, 20@40c per bu. Cucumbers, 15@20c per bu. Peas, home grown, marrowfat, \$2.00 per bu. Green and wax beans, 25@35c per bu. Lettuce, home grown, 30@50c per bu. Onions, new, 25@40c per bu. Beets, 25c per 3 doz. bunches. Cabbage, home grown, 50@65c per 100-lb crate. Celery, 40@50c per doz.
Potatoes—Home grown, 85c per bu. in car lots. Sweet potatoes, home grown, 75c per bu.

THE UNIVERSAL REPAIR MACHINE
FOR FARMERS AND MECHANICS.
Visa, Drill, Anvil, Tool Grinder, Pipe Clamp and Cut-off.
ONCE SHOWN, SELLS ITSELF.
For particulars, enclose stamp, and mention this paper. Address, **BLOOMFIELD MFG. CO., BLOOMFIELD, IND.** Salesmen Wanted.

W. E. SPEARS

RICHMOND, KAS.

For Sale—22 Head of Herefords.

Five registered cows—Lord Wilton and Anxiety—bred to Dial 3d No. 71453; fifteen grade cows, all bred; one yearling bull, Lord Wilton and Anxiety; one five-year-old bull, sired by Banker No. 1894, by Illinois No. 920 (5395).

WRITE FOR PARTICULARS.

SHROPSHIRE RAMS.

Single or car lots. First-class, all ages, at prices that will sell them. Will spare 50 breeding ewes—grand, useful, high-class ewes. Write your wants.
KIRKPATRICK & SON, Connor, Wyandotte County, Kansas.

Sir Charles Corwin 14520 and Harry Faultless, Jr.

HEADS OF HERD.

We have been in the show ring for the last three years, always winning the lion's share of the premiums. If you want prize-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale. Write or come and see us. We have an office in the city—Rooms 1 and 3 Firebaugh Building.
ELM BEACH FARM, Wichita, Kas.,
C. M. IRWIN. S. C. DUNCAN, Supt.

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. Lord Mayor heifers bred to Laird of Linwood for sale. Also bred Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

Address T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.

BLACK LEG

PREVENTED BY

PASTEUR "VACCINE."

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

THE "DEWEY" AUTOMATIC STOCK WATERER.

Every objection to hog waterers overcome. Valve eight inches in water; can not freeze; has a brass float which can not rust, water log, or allow mud to collect under it. Attachable to tank, barrel, box or pipe. Will water three hundred hogs a day, any number of sheep, calves, chickens, ducks, horses and cattle. Sent on trial, express prepaid, to be paid for if satisfactory. Costs nothing to try. Send for one. Our offer means something. Costs twice as much to manufacture as any other; retails the same, \$3.00. Address,
STOCK FOUNTAIN CO., LAKE CITY, IOWA.

WHEN WRITING ANY OF OUR ADVERTISERS PLEASE MENTION KANSAS FARMER.

GLENDALE SHORT-HORNS, Ottawa, Kas.
Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 113370, by Ambassador, dam Galanthus, and Scotland's Charm 137264, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale.
G. F. WOLF & SON, Proprietors.

ELDER LAWN HERD SHORT-HORNS.

THE Harris bred bull, GALLANT KNIGHT 1124466, 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. Address
T. K. TOMSON & SONS, DOVER, KANSAS.

Until September 15th

I will offer for sale five registered Jersey cows, four yearling heifers, one registered bull—choice of two. Also six Poland-China sows of Kiever's Model, J. H. Sanders, Chief I Know, World Beater, King Perfection strains, and a yearling boar of Black U. S. and Chief I Know blood, and fifteen or twenty pigs from above sows. Will sell with above live stock, if desired, forty acres of land two miles from city of Concordia; small house, stable for fourteen head cattle, ten acres alfalfa, young orchard and vineyard, good well and windmill; \$1,700 will take the whole outfit. Will also sell to the highest bidder, by mail, one Silver Gray bull nine years old, kind and a grand good sire; a solid dark colored bull 4 years old, Landseer blood, gets fine calves; a bull calf four months old and a beauty, and one dropped August 20th. Mail your bids care First National bank by September 15th.
W. S. JAMES, Concordia, Kas.

The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kas., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the Kansas Farmer. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

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

Poultry Show—At Topeka, January 9 to 14, 1899 C. H. Rhodes, judge.

HATCHING AND RAISING CHICKENS IN WINTER.

Start right, by selecting eggs from vigorous stock. This cannot be too strongly emphasized, for a chick lacking vitality is hard to raise, and more liable to disease afterward than if strong at first. Give clean, comfortable quarters to the breeding stock, avoid overcrowding, and, with the grain, give green food and meat in some form.

Care as to these details tends to insure fertility in eggs, which in winter are not apt to be as fertile as in the spring months. Eggs should be gathered often, so as not to become chilled.

HATCHING BY HENS.

Select some secluded place, away from laying hens and safe from destructive animals; carefully prepare the nest boxes by placing them in the bottom soil or inverted turf and pack well the straw, hay or leaves, so that there may be no danger of corners or hollows for eggs to get misplaced. When the hen or hens become broody, allow them to remain for at least two days; then at dusk carefully transfer them to the nests in the hatching house, using at first artificial eggs; cover them till the next night, when the cover can be removed, and let them come off for feed. When a hen after feeding returns to the nest it is safe to give them eggs—not more than eleven. If she does not return, place her there and cover again. At least five hens should be set at once, and twenty can occupy one room with safety, with a little watching, till all are established. A box with dry sand or road dust and a supply of grit in some form should be left convenient, and fresh water and feed left each day accessible. Some insecticide should be scattered in the nests and over the hens, at least three times in the three weeks. If at any time eggs are broken in the nests, the remaining ones should be carefully washed in tepid water, and the nest made clean again. Save an occasional glance, to see that all is right, they should be left undisturbed as far as possible.

HATCHING BY INCUBATORS.

Hens cannot be depended upon to hatch and raise broods in winter; one must wait for them to become broody. Even if inclined to sit, they can hardly be spared for that purpose when eggs command the highest price. Artificial hatching is a necessity in the winter, and the pains now taken in the manufacture of incubators, of which there are many doing good work, makes the hatching of chicks in the coldest of weather, once so difficult, now possible and easy. An incubator can be controlled and used when most needed, supplying the real want of hatching chicks in large numbers, so that advantage may be taken of the high price paid for broilers in the early spring. This work is done at a season when there is leisure, one incubator doing the work of from ten to fifty hens.

In this, as in any business, one must learn that there is a risk, and that some fall cannot be denied, yet very many succeed, and patient perseverance and a fair amount of common sense will surely conquer in the end. An incubator pays, even if used only the last week or few days of hatching, assuring chicks free from lice, one great cause of mortality, and saving all crushing of chicks in the nest by hens. Used in connection, it works well. Still, we have the testimony of hundreds that, side by side, an incubator well managed will far excel the hen in winter hatching.

Raising chicks in winter by hens is hard to accomplish, even under the most favorable conditions. The space occupied by one hen and brood would easily accommodate fifty chickens alone. Often when the chicks are three or four weeks old she commences laying, and they are left motherless. Unlike a hen, a brooder is ready to hover chicks at all times. Even if hatched by hens, a vast amount of labor is saved by the use of brooders, and with them one hundred chicks can be as easily cared for as ten. Confined as they must be in small quar-

ters, they are safe from destructive animals.

Great care should be taken not to keep the brooder or houses too warm, and the heat should be gradually reduced as they increase in size. Give them fresh air from the first, with plenty of sunlight. Make the condition in every respect as near like a May day as possible. An open shed connected with the house, where they can run in and out at will, is desirable. Much depends upon the quiet and care of the first week. Feed hard-boiled eggs with three times the bulk of bread crumbs, or bread and milk for the first two days. Cooked food is safe always—corn bread, dry oatmeal, wheat and cracked corn as they grow older; green food of almost any kind for variety; grit is required from the first, egg shells, oyster shells, charcoal, etc.; fresh water always. Study their wants, and be sure that when the unhappy peep is heard something is wrong; to grow rapidly they must be made happy.

No business, much less that of hatching and raising chickens, can succeed without personal supervision. They suffer from neglect, and should be regularly cared for each day. There should also be fondness for the work: "Love makes all labor light."

There must be thought and careful attention to details, with gentleness, if one hopes to succeed.—Mary Moody, East Hartford, Conn., in American Poultry Yard.

Some Points.

While there is a good profit in poultry if rightly managed, a little mismanagement or carelessness will often either materially reduce or entirely destroy the possible profits. On the farm where the fowls are allowed free range it is comparatively an easy matter to overfeed, and this, of course, increases the cost. It is always good economy to feed liberally, sufficient to keep them in a good, thrifty condition, but it is a waste to overfeed. With the laying hens, or those kept for growth, it is not best to feed in the morning quite all they will eat up clean, as, if fed too liberally, they will not take as much exercise as is best for their health. Fowls being fattened for market, however, should have all they will eat up clean four or five times a day. It is a good plan, however, with all fowls, from this time on, to give all the whole corn they will eat just before they go on the roosts at night. During the winter the nights are cold and long, and the fowls need a full crop before going on the roosts.

While the crops are being harvested is a good time to select out more or less feed for the poultry during the winter. The small potatoes and turnips, the small beets and carrots, as well as the cabbage that does not head up well, should all be saved to use as feed for the poultry next winter. These can be made to take the place of green food during the winter, and will not only materially lessen the cost of feeding, but also make better results possible.

Go carefully over the flock and select out all that do not give good promise of a fair return during the winter. Every fowl kept through the winter that does not pay a profit for keeping lessens in just that much the profits of the whole flock; hence, only the roosters intended for breeding, with the hens and pullets desired for layers or breeders, should be wintered. All of the rest should be fattened and marketed, at least before Christmas.

With poultry, as with other stock, as the weather gets colder the cost of feeding and keeping is increased, and a safe rule generally is to market as soon as in a good marketable condition. Do not winter over unprofitable fowls nor more than the quarters will shelter comfortably. If feed must be purchased, secure it in good season, as prices are nearly always lower now than later on.

With early-hatched pullets and early-moulting hens, clean, dry, comfortable quarters, sound, nutritious feed and pure water, a plentiful supply of eggs can be secured through the winter, and eggs in winter are usually profitable.

See, also, that what fowls are sent to market are in good condition, carefully dressed, and so packed that when opened they will present a neat, clean, plump appearance.

Very little corn should be fed to poultry during the summer, unless it be to finish for market. It is rather an exceptional case when, in preparing fowls for market, a few days' feeding with a good fattening ration cannot readily be made profitable; and when this is the case corn can always be made the principal feed. But, with the laying hens, as well as the growing fowls, very little corn is necessary. Ground oats, middlings and bran make a good ration. Sorghum seed, wheat and the table scraps make up a much better ration at this time than

corn; and, considering the results secured, will be found much more economical.

Generally, where the fowls are given a free range on the farm, two feeds a day will be sufficient, one in the morning and one at night. During the summer if on free range they will pick up considerable grain, besides bugs and insects of different kinds, and the fallen fruit in the orchard will help them. The object is to keep in a good, healthy and thrifty condition at a low cost.

Eldon, Mo. N. J. SHEPHERD.

Poultry Notes.

Do not set eggs from the small breeds under large hens, because they are likely to break them.

To purchase eggs is the least expensive way to get a start of fine poultry, but it takes longer.

Expensive poultry houses are for the rich and should hinder no one from going into the business.

Select the breed you like best, take the proper care of them and depend upon it, they will take care of you.

Chickens, turkeys, ducks and guineas kept in the same yard will be almost certain to end in failure and disappointment.

Farmers who have a patch of wet land, marshy and almost useless, could get a little return from it by keeping geese. A few would get most of their summer food from such a spot and will

pay better in proportion to their cost than any other stock on the farm.

Where one breed is wanted and that for general use choose the Plymouth Rock or Wyandottes and you will be safe.

Where hens are moved from one place to another during the laying season, they will diminish laying, or perhaps stop for a while.

Let fowls have free run of the clover field two or three times a week, turning them into it during the dry part of the day, but never after a rain or in the early morning when the dew is on the grass.

Fowls in confinement if not kept busy with scattered small grains or a yard to scratch in, will soon neglect their food, especially if fed corn, and get into the habit of pulling feathers from one another. Feed less corn and for a week do not give and food in the morning. At night feed lean meat chopped fine, and every other day as much green stuff as they will eat.

As a rule, little grain should be given fowls during summer, and if possible avoid feeding corn. Fowls need nitrogenous foods largely in warm weather, such as cut clover, cut bone, meat, cabbage, potatoes, skim-milk and the like. Corn in the winter supplies needed warmth and fat, but poultry would be much better off if it was dropped entirely from summer rations.

The surplus stock that has ceased laying and that will not be profitable to

.. CLOTHING ..

Salesmen Wanted.



\$150.00 PER MONTH and expenses made by all our active men. We pay many far more.

We want men in every County in the United States. If your reference is satisfactory we will start you at once. No experience necessary. No capital required. We furnish a full line of samples, stationery, etc. A tailor's-for-the-trade complete outfit ready for business. No commission. Also, you regulate your profits to suit yourself. No house to house canvass. This is not one of the many catchy advertisements for agents, but one of the very few advertisements offering a rare opportunity to secure strictly high grade employment at Big wages.

We are the Largest Tailors in America.

We make to measure over 300,000 suits annually. We occupy entire one of the largest business blocks in Chicago. We refer you to the Bank of Commerce in Chicago, any Express or Railroad Co. in Chicago, any resident of Chicago. Before engaging with us, write to any friend in Chicago and ask them to come and see us, then write you it is a rare opportunity to secure steady, high class, big paying employment. **BETTER STILL**—come to Chicago yourself and see us before engaging and satisfy your self regarding every word we say. You can get steady work and big pay. Work in your own county 300 days in the year, and you can't make less than \$5 every day above all expenses.

We Want to Engage You to take orders for our Made-to-Order and Measure Custom Tailoring (Men's Suits, Pants and Overcoats). We put you in the way to take orders from almost every man in your county, a business better than a store with a \$20,000.00 stock. You will have no competition.

WE ARE THE LARGEST TAILORS IN AMERICA of Fine Custom-Made Garments. We buy our cloth direct from the largest European and American Mills. We operate the most extensive and economic custom tailoring plants in existence, thus reducing the price of Suits and Overcoats made-to-order to \$5.00 and upward; Pants from \$1.50 to \$5.00. Prices so low that nearly every one in your county will be glad to have their Suits and Overcoats made to order.

WE FURNISH YOU a large, handsome leather bound book containing large cloth samples of our entire line of Suits, Overcoats and Pants, a book which costs us several dollars to get up, also Fine Colored Fashion Plates, Instruction Book, Tape Measure, Business Cards, Stationery, Advertising Matter, your name on rubber stamp with pad complete. We also furnish you a Salesman's Net Confidential Price List. The prices are left blank under each description so you can fill in your own selling prices, arranging your profit to suit yourself. As soon as you have received your sample book and general outfit and have read our book of instructions carefully, which teaches you how to take orders, and marked in your selling price you are ready for business and can begin taking orders from every one. At your low prices business men, farmers, and in fact every one will order their suits made. You can take several orders every day at \$1.00 to \$5.00 profit on each order, for every one will be astonished at your low prices.

YOU REQUIRE NO MONEY Just take the orders and send them to us and we will make the garments within 5 days and send direct to your customers by express C. O. D., subject to examination and approval at your selling price, and collect your full selling price, and every week we will send you a check for all your profit. You need collect no money, simply go on taking orders, adding a liberal profit, and we deliver the goods, collect all the money and every week promptly send you in one round check your full profit for the week. Nearly all our good men get a check from us of at least \$40.00 every week in the year.

THE OUTFIT IS FREE We make no charge for the book and complete outfit, but as EACH OUTFIT COSTS US SEVERAL DOLLARS, to protect ourselves against many who would impose on us by sending for the outfit with no intention of working, but merely out of idle curiosity, AS A GUARANTEE OF GOOD FAITH ON THE PART OF EVERY APPLICANT, we require you to fill out the blank lines below, giving the names of two parties as reference, and further agreeing to pay ONE DOLLAR and express charges for the outfit when received, if found as represented and really a sure way of making big wages. The \$1.00 you agree to pay when outfit is received does not begin to pay the cost to us but insures us you mean business. **WE WILL REFUND YOUR \$1.00 AS SOON AS YOUR ORDERS HAVE AMOUNTED TO \$25.00**, which amount you can take the first day you work.

Fill out the following lines carefully, sign your name, cut out and send to us, and the outfit will be sent you at once.

AMERICAN WOOLEN MILLS CO., Enterprise Bldg. CHICAGO, ILL.

GENTLEMEN:—Please send me by express C. O. D., subject to examination, your Sample Book and Complete Salesman's Outfit, as described above. I agree to examine it at the express office and if found exactly as represented and I feel I can make good big wages taking orders for you, I agree to pay the express agent, as a guarantee of good faith, and to show I mean business, One Dollar and express charges, with the understanding the One Dollar is to be refunded to me as soon as my sales have amounted to \$25.00. If not found as represented and I am not perfectly satisfied I shall not take the outfit or pay one cent.

.....
Sign your name on above line.

.....
Name of Postoffice, County and State on above line.

.....
Your age.....

.....
Married or single.....

.....
Address your letters plainly to

AMERICAN WOOLEN MILLS CO., Enterprise Building, CHICAGO, ILL.

To our Readers:—This firm is thoroughly reliable, this offer is bona fide, honorable and liberal and a great opportunity for industrious men to get steady and profitable employment.—Editor.

In writing mention Kansas Farmer.

take into winter quarters should be put on the market in good condition. Confine them in a yard of limited dimensions, by themselves, for two or three weeks and feed wheat and corn morning and night, with a mixed ration at noon. They will gain a pound or two in weight, which will pay for the extra care and food and go to market plump and in good condition.

The Minorca-Langshan cross gives a good fowl for winter egg production. The eggs are large, there are lots of them and the hens are as bright, lively and vigorous as one could wish for. A cross which gives a smaller but richer colored egg and a better fowl for market is the White Leghorn-White Wyandotte. This latter cross may some day be bred and selected until it is made a perfect breed for laying what is wanted, a Leghorn with a dark-shelled egg.

It is a good plan in summer, when the roads are dry, to scrape up a few barrels of dry dust from the roads and put it in barrels in the henhouse. It makes excellent dust baths for hens in winter, and a little sprinkled over the hen droppings will prevent waste. The road dust itself has considerable fertility, as it is largely made up of excrement of grain-fed horses mixed with fine earth. But the most important fact about road dust is that the chickens will rid themselves of lice by wallowing in the dust if they have a chance. The dust kills the lice by stopping up their breathing places.

\$16.10 to Cincinnati and Return.

Tickets on sale September 3, 4 and 5, and for train No. 2 of the 6th, limited to October 2, 1898. Agent Santa Fe Route will reserve berths in sleeper and check baggage through.

ITALIAN BEES.

Bred from queens imported from Italy. Full colonies: two, three and four frame nucleus shipped anywhere and safe arrival guaranteed. We ship Bees any time from March to November. Queens, hives and supplies generally.
A. H. DUFF, Larned, Kas.

THE IMPROVED VICTOR Incubator
Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class hatcher in the market. Circulars FREE.
Geo. Kettel Co., Quincy, Ill.



It's easy to haul a big load up a big hill if you grease the wagon wheels with
MICA Axle Grease
Get a box and learn why it's the best grease ever put on an axle. Sold everywhere.

GOOD WHEELS
MAKE A GOOD WAGON. Unless a wagon has good wheels it is useless.
THE ELECTRIC WHEELS are good wheels and they make a wagon last indefinitely. They are made high or low, any width of tire, to fit any axle. They can't get loose, rot or break down. They last always. Catalog free.
Electric Wheel Co., Box 46, Quincy, Ill.

"ELI" STEEL CASE BELT POWER PRESS
with patent self-feeder and automatic block placer. No more crushed arms, hands or feet. 53x30 in. feed opening. Automatic condensing feed hopper. Strong, fast, durable and long lived. Catalogue free. Write for what you want.
Collins Plow Co., 1120 Hampshire St., Quincy, Ill.

HOOK ON—CUT OFF
The easiest-working, closest-cutting, simplest, strongest and handiest dehorner is the latest
IMPROVED CONVEX DEHORNER
Never crushes the horn nor pulls it apart. Made on an entirely new principle. Catalogue free.
WENSTER & DICKINSON, Box 20, Christiana, Pa.
Western trade supplied from Chicago salesroom.

We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than elsewhere.
Our productions are standards; are first-class in every respect and are sold on trial. Send us a postal and we will tell you all about them.
CURRIE WINDMILL CO., Manhattan, Kas.
AGENTS WANTED.

OSGOOD 3 Ton \$35
TANDARD SCALES
Full Descriptive Catalogue FREE
OSGOOD SCALE CO., Binghamton, New York.
Good agents wanted in unoccupied territory.

Assure between burrs in grinding is carried on chilled roller bearings.
Large inside burr revolves twice to sweep's one. Ordinary length sweep.
DAIN DOUBLE MILL
Sold under an absolute guarantee to do double the amount of work of any other mill of same size or money refunded. Write for circulars and prices.
DAIN MFG. CO., Carrollton, Mo.

Brass, Aluminum, Grey Iron Castings
Patterns, Models, Machine Work.
TOPEKA FOUNDRY, TOPEKA, KAS.

HORSE-HIGH
Laying aside all speculation these remain as the requisites of a perfect fence. Our Duplex Automatic Machine makes just such a fence in 100 styles at the rate of sixty rods per day, at a cost for wire of only
BULL-STRONG
18c. for a good farm fence; 15c. for poultry fence; 16c. for a rabbit-proof fence and 17c. for a good hog fence. We will sell you plain, coiled spring or barb wire direct at wholesale prices. Get our catalogue before buying.
Kitselman Bros., Box 64, Ridgeville, Ind.
PIG-TIGHT

When writing advertisers please mention Kansas Farmer.

DISSTON'S
It will pay you to buy a new saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are FULLY WARRANTED. For sale by all dealers. Send for PAMPHLET OR SAW BOOK, mailed free.
HENRY DISSTON & SONS, Philadelphia, Pa.

TWO TONS A DAY MORE THAN OTHERS OR NO SALE
THE FINEST PRAIRIE HAY MACHINE IN THE WORLD.

Special Inducements to Readers of This "Ad."

AMERICAN BALER CO., 1205 UNION AVENUE, KANSAS CITY, MO.

PERFECT FARM FENCE Made of best doubly annealed galvanized steel wire. Top and bottom wires No. 9. All other wires No. 11. We use the strongest stay wire in any woven wire fence on the market—hence more strength and durability.
Our **LOOP KNOT** (entirely new feature, patented) provides perfect expansion and contraction and keeps it tight at all temperatures. Our Loop Knot being uniformly distributed throughout each foot of fence is, in effect, the same as placing one coil of a spiral spring in every foot throughout the entire length of fence, BESIDES GREATLY STRENGTHENING IT. Our Loop Knots make the fence plainly visible and impossible for stay wire to slip or give. It is Hog tight and Bull strong. Will turn all kinds of stock without injuring them.
Where we have no agents a liberal discount will be given on introductory order. Reliable farmer agents wanted in every township.
Send for catalogue and prices.
Pittsburg Woven Wire Fence Co., Pittsburg, Pa.

A Big Hay Crop
has now to be marketed. The easiest way to get it there is in the form of bales. THE BEST MACHINE to bale with is an
"ELI" BALING PRESS.
46-in. Feed Opening.
It makes the most compact, even-sided bales. You can get more hay in a car—cheaper freight. 88 Styles and Sizes—Horse or Steam Power. Made entirely of steel. It is light, strong and durable. Better send at once for our free illustrated catalogue.
COLLINS PLOW CO., 1120 Hampshire St., QUINCY, ILL.

LIGHTNING HAY PRESS
STEEL
Special prices.
Kansas City Hay Press Co., 107 Mill St. Kansas City, Mo.

THE KANSAS CITY STOCK YARDS
—ARE THE—

FINEST EQUIPPED, MOST MODERN IN CONSTRUCTION AND AFFORD THE BEST FACILITIES
For the handling of Live Stock of any in the World.

THE KANSAS CITY MARKET

Owing to its Central Location, its Immense Railroad System and its Financial Resources, offers greater advantages than any other in the Trans-Mississippi Territory. It is the Largest Stocker and Feeder Market in the World, while its great packing house and export trade make it a reliable cash market for the sale of Cattle, Hogs, and Sheep, where shippers are sure to receive the highest returns for their consignments.

	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1897	1,921,962	3,350,796	1,134,236
Sold in Kansas City 1897	1,847,673	3,348,556	1,048,233

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

Burlington Route
BEST TRAINS
VESTIBULED "ELI" TO CHICAGO.
VESTIBULED LIMITED TO ST. LOUIS.
FREE CHAIR CARS, LATEST PATTERNS OF SLEEPERS.
W. WAKELEY, G. P. A., St. Louis, Mo. J. C. RAMHALL, T. P. A., St. Joseph, Mo.



Port Arthur's Prosperity Is Based on Business

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

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

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

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

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

For information write to
F. A. HORNBECK,
General Manager
Port Arthur Townsite Co.,
KANSAS CITY, MO.

ALFALFA SEED FOR FALL SOWING

MOBETH & KINNISON, GARDEN CITY, KANSAS, Wholesale and Retail Seedsmen.

Send for Our Free Manual on the King of Forage Plants.

J. G. Peppard MILLET CANE SEEDS CLOVERS TIMOTHY GRASS SEEDS. 1400-2 Union Avenue, KANSAS CITY, MO.

Special Want Column.

"Wanted," "For Sale," "For Exchange," and small 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.

WILL EXCHANGE—Pedigreed fox terriers, greatest ratters bred, for Berkshires or Barred Plymouth Rocks. W. T. Ballagh, Nevada, Mo.

HEREFORD CATTLE—Breeding stock for sale. H. Archibald cattle a specialty. Visitors welcome. J. C. Curry, proprietor "Greenacres Farm," Quenemo, Osage Co., Kas.

FOUR YOUNG BOARS for sale at a bargain; two by Look-Me-Up by Look-Me-Over and two by Tecumseh Short Stop. Also gilts and sows of good breeding, at reasonable prices. Combination Model 2012 heads the herd. W. B. Van Horn, Lawrence, Kas.

WANTED—To sell, or exchange for boar of equal breeding and quality, Hugo Wilkes No. 17167, farrowed April 2, 1898. Also choice Poland-China gilts for sale. Call on or address Walter Roswurm, Beman, Morris Co., Kas.

WANTED, TO TRADE—Thoroughbred Poland-China hogs for Shropshire sheep. For particulars, address Walter Roswurm, Beman, Morris Co., Kas.

FOR SALE OR TRADE—A Norman stallion, age 10 years, weight 1,900 lbs. For further information address John D. Marshall, Walton, Kas.

RENO POULTRY FARM, Mount Hope, Kas., Ira A. Fisher, prop'r. Breeder of White F. Rocks, White Holland Turkeys, White Guinea, Pekin Ducks. Eggs and stock for sale in season. Prices reasonable.

POLAND-CHINA BOARS—Sired by the great Hadley Boy No. 18518, at \$12 each. W. S. Powell, Moline, Elk Co., Kas.

HADLEY BOY 18518—Price \$40. W. S. Powell, Moline, Elk Co., Kas.

FOR SALE—125 Western yearling heifers, of good quality and color. Address L. Natlon, Hutchinson, Kas.

RED RUSSIAN SEED WHEAT—For sale at \$1.10 per bushel sacked, at the Kansas Seed House. F. Barteldes & Co., Lawrence, Kas.

FOR SALE—75 steer calves; reasonable for cash. Address J. W. Higgins, Jr., Hope, Kas.

FOR SALE—250 choice grade Shropshire ewes, well woolled and bred to registered Shropshire bucks; also 125 lambs for sale reasonable for cash. Address J. W. Higgins, Jr., Hope, Dickinson Co., Kas.

RIGHLAND HERD.—I want to close out the entire herd of Poland-China sows and herd boars, including Kiever's 1st Model 18245 S., What's Wanted Jr. 2d 18334, and B's Black U. S. 18937. The breeding and quality of these boars ought to suit anybody. Come and inspect, the only way to get suited. F. W. Baker, Council Grove, Morris Co., Kas.

DAIRY WAGON FOR SALE—Good two-horse covered dairy wagon, custom made. A. E. Jones, Topeka, Kas.

FOR SALE OR TRADE—Three Shetland ponies. Call or address H. W. McAfee, Topeka, Kas. (Prospect Farm, three miles west of Kansas avenue.)

HIGH-GRADE Shropshire rams, lambs and yearlings. E. W. Melville, Rudora, Kas.

SHORT-HORNS FOR SALE—Forty-six cows and heifers, Cruikshank, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Cruikshank, Royal Prince 100646. Six bulls ready for service, sired by Young Mary bull, Glendon 119371. Parties met by appointment. Theodore Saxon, St. Marys, Pottawatomie Co., Kas.

BERKSHIRES—Choice bred sows by Imported Lord B Comely, and boars ready for service. Wm. B. Sutton & Son, Russell, Kas.

SHORT-HORN BULLS—Cruikshank-topped, for sale. Choice animals of special breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

BERDEEN-ANGUS BULLS—Three individuals of serviceable ages; registered. Wm. B. Sutton & Son, Russell, Kas.

FOR SALE—Five first-class registered Clydesdale stallions. H. W. McAfee, Topeka, Kas.

MACLEAN FARMERS' SUPPLY CO., Kansas City, Mo. (Between Union Depot and Stock Yards.) Sell machinery and other supplies to farmers direct, saving the consumer middlemen's profits. Send now for 1898 Spring Price List.

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.

FOR SALE—A few October pigs of 1897 farrow, and some bred sows to Kansas Boy and Success I Know. Also B. P. Rock eggs, \$1 per setting. H. Davison & Son, Waverly, Kas.

FOR SALE—Thirteen fine Poland-China boars. Call on or address H. W. McAfee, Topeka, Kas. (Farm three miles west of Kansas avenue.)

WRITE TO ALEX RICHTER—Hollyrood, 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.

FOR SALE OR EXCHANGE—Two Galloway bulls. Address W. Guy McCandless, Cottonwood Falls, Kas.

640 ACRES ARKANSAS LAND—Two miles from station, to trade on Kansas farm. Will pay balance or assume incumbrance. E. W. Melville, Rudora, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy-backs and let-down end-gate, for \$55. Warranted. We will ship on approval to responsible parties. Kinley & Lannan, 424-426 Jackson street, Topeka, Kas.

YEARLING SHORT-HORN AND GALLOWAY BULLS—Registered and high grades, of Bates and Cruikshank stock, at bedrock prices, either by carload or singly, time or cash. J. W. Troutman, Comiskey, Kas. (Northern Lyon county, Mo. Paolic R. R.)

TEN SHORT-HORN COWS AND HEIFERS—Registered, a choice bunch; want to sell all together; will be five more calves within two months. Price, \$1,100. J. M. Anderson, Box 246, Salina, Kas.

WANTED—Ladies and gentlemen to procure subscriptions for the best fifty-cent woman's monthly magazine in the United States. The most beautiful and popular woman's magazine on very liberal commissions. Terms, sample copies, special helps and premiums furnished free. Address THE AMERICAN QUEEN, 78-80 Walker St., New York.

LIVE STOCK AUCTIONEERS.

GEORGE W. BARNES, Auctioneer, Valencio, Kas. Lowest terms. Extensive experience both as breeder and salesman. All correspondence given prompt attention.

J. N. HARSHBERGER, LIVE STOCK AUCTIONEER, LAWRENCE, KAS. Years of experience. Sales made anywhere in the United States. Terms the lowest. Write before claiming date.

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

HARNESS Write for illustrated catalogue. Largest Harness and Carriage house in the Northwest. NORTHWESTERN HARNESS & CARRIAGE CO., 172 6th St., St. Paul, Minn.

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

SUNNY SLOPE, EMPORIA, KANSAS.



WILD TOM 51592, the great son of the great sire, Beau Real 11055, heads the herd.

Other Bulls in service are: CLIMAX, LOMOND, Imp. KEEPON, and others.

Registered Hereford Cattle.

At the spring sales of 1898 we sold the highest-priced male and highest-priced female, and also had the highest averages for 5, 10, 20, 40, 60, 80 and 100 head. These averages were higher than that of any Hereford sale of recent years. Salisbury, sold to Mr. Murray Boacock, brought the highest price any Hereford bull ever sold for at public sale in America. Last year the herd won more premiums than any other Hereford herd. We point to the above facts as the best evidence of the superior character of the animals comprising the herd. The attention of discriminating buyers is called to the fact that we have for sale a splendid lot of males and females, bred in the purple, which will be sold as low as equal merit and equal breeding can be purchased elsewhere. Sixty head of the females are bred to imported bulls. Visitors always welcome.

THOS. EVANS, Mgr. C. S. CROSS, Emporia, Kas.

VERNON COUNTY HERD OF REGISTERED POLAND-CHINAS

125 head in herd. Herd boars, King Hadley 167668, and Turley's Chief Tecumseh 2d 17978 S. Forty-six head of fall pigs that would be considered "the best" in a herd in United States. Write for particulars. J. M. TURLEY, Statesbury, Vernon Co., Mo.

R. S. COOK, WICHITA, KAS., Poland-China Swine BREEDER OF

The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 28441, Black Joe 28603, World Beater and King Hadley. For Sale, an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly-bred sows. Inspection or correspondence invited.

200 PURE-BRED POLAND-CHINA SWINE FOR SALE 200

By GEO. CHANNON, Hope, Dickinson Co., Kas., Breeder of Poland-China Swine and Short-horn Cattle. I must reduce my herds to the minimum on account of short feed and insufficient accommodations for winter, therefore will sell at prices that should be a big object to purchasers. My offering consists of tried brood sows, gilts and boars, all ages. Will sell singly or in lots to suit. The young stock is by my herd boars Prince Bismarck 1867, Seldom U. S. 18218, Duke of Weston and Corwin. Come now and get a bargain. Also, for sale thirty extra fine young Short-horn bulls, sired by Glendower 10338. None better in Kansas.

Superior Herd. Combination Sale of Poland-Chinas Crescent Herd.

AT HUTCHINSON, KAS., TUESDAY, SEPT. 27, 1898.

Eighty-five Head of Up-to-date Poland-Chinas of Excellent Breeding and Individuality, Comprising a Draft of Sixty Head From Superior Herd and Twenty-five Head From Crescent Herd, Superior herd was established in 1891, and this is a closing-out sale, and the offering was selected from more than a hundred head. It consists of three herd males, Princeton Chief 14543, Gen. Hiderstretcher 37247, and Hadley Faultless Corwin by Hadley Jr.; twenty-seven sows and gilts, one year and over, bred to above boars for fall farrow. Sows by Greenwood, Guy's Unfortunate, Cash Price, Longfellow Jr., Low Down Tecumseh, Lawrence C. O. J. Free Trade, Darkness Quality 2d, and Tecumseh Wilkes; thirty boars and gilts of spring farrow. The Crescent herd draft consists of twenty-five sows and gilts, bred and open, and boars and gilts of March and April farrow. One choice yearling boar by Guy Darkness. Guy Darkness 18293 at head of herd, assisted by Best Nima 18612. Breeders from a distance entertained free. Sale in tent at Wilson's barn. Sale to begin at 12 noon. Terms: All sums of \$15.00 or less cash, without discount; over that amount 5 per cent. off for cash, or a credit of four months on approved note with 8 per cent. interest from date. Write to either of us for catalogue.

COL. JAS. W. SPARKS, Marshall, Mo., and COL. JAS. N. HARSHBERGER, Lawrence, Kas., Auctioneers. THOS. H. FOLEY, SAM W. HILL, Hutchinson, Kas.

REGULAR SEMI-ANNUAL SALE OF REGISTERED POLAND-CHINA SWINE.

AT MARION, MARION COUNTY, KANSAS, WEDNESDAY, SEPTEMBER 14, 1898.

FORTY-THREE HEAD SPECIALLY SELECTED POLAND-CHINAS—Thirty-five sows and gilts, with eight serviceable boars. One-third of the sows will go with litters at side. Other females bred to farrow after sale and some open for early spring litters. Full particulars as to breeding, etc., in the sale catalogue, now ready to mail to all desiring it. I consider this lot to be the best I ever drove into the sale ring. Free entertainment for parties from a distance at Elgin Hotel. TERMS:—Will be cash or note bankable at State Bank of Commerce, Marion, Kas.

Col. S. A. SAWYER, Manhattan, Kas., and Col. JAS. N. HARSHBERGER, Lawrence, Kas., Auctioneers. W. H. WREN, Marion, Kas.

Grand Public Sale of High-class Poland-Chinas

AT LYNDON, KAS., MONDAY, SEPTEMBER 26, 1898.

Sixty head specially selected tops, consisting of bred and open sows, gilts and thirty extra selected boars, sired by Model U. S., Chief Tecumseh 2d, Hadley Jr., W. & H.'s Black U. S. and the I Knows. Sale catalogue now ready to mail to all desiring it. Free entertainment to parties from distance at the Cottage House. TERMS:—All sums of \$15 and under, cash, without discount; over \$15, nine months' time with interest at 8 per cent., or 5 per cent. off for cash.

COL. JAMES W. SPARKS, Auctioneer. F. L. & C. R. OARD, Vassar, Kansas.