

KANSAS FARMER

ESTABLISHED IN 1863.
VOL. XXXVI. NO. 33.

TOPEKA, KANSAS, THURSDAY, AUGUST 18, 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 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. 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. P. Norton, Council Grove, Kas.

SWINE.

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

CENTRAL KANSAS HERD OF THOROUGH-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 Jersey cattle, Poland-China and Large English Berkshire hogs, M. B. turkeys, B. P. Roost 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. Perfect, 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, Panola, 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.,

—Breeder of—

Short-horn Cattle and Poland-China Swine

Of the Best Strains.

Stock for sale. Correspondence and inspection invited.

"HIGHLAND POLAND-CHINAS."

Twenty-five very fancy fall boars, some of which will do to head any herd or to go in any show ring. Sired by Knox All Wilkes 18179 S. and Highland Chief 18334 S. by Chief Tecumseh 2d 9115. No better sires in any herd. Our prices very low if taken at once. One hundred fine spring pigs by same sires. Plymouth Rock Eggs.

DIETRICH & SPAULDING, Richmond, Kas.

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 Hidestretcher. Dams by Black Corwin, Wren's Medium, Protection Boy, Moss Wilkes Tecumseh, Hadley M. Washington. Get 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. R. 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 19992 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,

Muscatoh, 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.

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 Chester White swine and Light Brahma poultry. J. T. LAWTON, BURTON, 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 14361, Princeton Chief 14543, Col. Hidestretcher 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 Cruikshank bulls as Craven Knight 96923, Thistle-top, Master of the Rolls, Earl of Gloster 74523, Viscount Richmond, Knight Templar 66658, 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 CREEK FARM

POLAND - CHINAS

ARE SECOND TO NONE.

FARM READ THIS SPECIAL OFFER:

Will sell February and March pigs during August for \$16 each, delivered at any railroad station in Kansas or Nebraska. They will weigh 150 pounds.

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 a selected lot of bred sows of different ages. I will give very reasonable prices on all stock. Satisfaction guaranteed. James Mains, Oskaloosa, Jefferson 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.

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, THE BEST FARMERS' SHEEP.

For sale, a few very fine early and large ram lambs from eligible to registry sires and high-grade ewes. Write for description and reasonable prices to L. A. Seely, Lyons, Kas.

SHROPSHIRE RAMS.

A splendid lot of yearling and spring lambs at low prices. Write your wants, or better, come and select. Address, J. C. STONE, JR., Leavenworth, Kansas.



CATTLE.

SILVER CREEK HERD

SHORT-HORN CATTLE.

Scotch and Scotch-topped, with the richly-bred Champion's Best 114071 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, Habbu, and the saddle stallion, Rosewood, a 16-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address **BLACKSHERE BROS., Elmdale, Chase Co., Kas.**

SUNRISE STOCK FARM.

C. A. STANNARD, Prop., Hope, Kas.

Breeder of

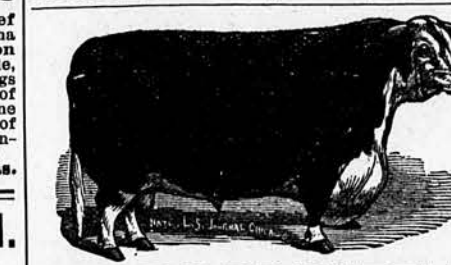
Hereford Cattle and Large English Berkshire Hogs.

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 3 to 7 years old for sale.

ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruikshank 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.**



HEREFORD CATTLE

Of highest quality, both as to form and ancestry for sale—twenty cows and seven young bulls on hand.

J. C. CURRY, Prop., "Greensacres" Farm, Quenemo, Kas.

Agricultural Matters.

GRADING OF GRAIN.

The following revised grades of grain are in force in the United States from and after July 1, 1898:

WINTER WHEAT.

No. 1 White Wheat.—To be white winter wheat, sound, dry, reasonably clean, and equal in quality to No. 1 red, weighing not less than 58 pounds to the bushel, and to contain at least 90 per cent. of white wheat.

No. 2 White Wheat.—To be sound, dry and reasonably clean white winter wheat, may be slightly shrunken or discolored, weighing not less than 55 pounds to the bushel, and to contain at least three-fourths white winter wheat.

No. 3 White Wheat.—To be sound white winter wheat, may be shrunken or discolored and not well cleaned, and weighing not less than 52 pounds to the bushel.

Rejected White Wheat.—To be white winter wheat, may be warm or musty, but not so badly damaged as to render it unmerchantable.

No. 1 Soft Red Winter.—To be sound, dry and reasonably clean, to include all varieties of soft winter wheat, and to contain not more than 3 per cent. of white wheat.

No. 2 Soft Red Winter.—To include all varieties of soft winter wheat, to be sound, dry and fairly well cleaned, to contain not more than 8 per cent. of white wheat, and weighing not less than 58 pounds to the bushel.

No. 3 Soft Red Winter.—To be sound, and include shrunken and dirty winter wheat, weighing not less than 55 pounds to the bushel, and to contain not over 10 per cent. of white wheat.

No. 2 Hard Red Winter.—To be the hard variety, sound, dry and reasonably clean, and shall not contain more than 10 per cent. of white wheat.

No. 3 Hard Red Winter.—To include inferior or dirty hard winter wheat, but suitable for flouring, weighing not less than 56 pounds to the bushel, and containing not more than 15 per cent. of white wheat.

No. 4 Hard Red Winter.—To include inferior or dirty winter wheat of the hard variety and weighing not less than 52 pounds to the bushel.

No. 1 Rejected Soft Red Winter.—To be reasonably clean, may be musty or warm, and weighing not less than 55 pounds to the bushel.

No. 2 Rejected Red Winter.—To include all rejected red winter wheat, but must not weigh less than 50 pounds to the bushel.

Grade of Wheat and Rye Mixed.—The grain to be sound and containing at least 75 per cent. of wheat.

No Established Grade of Wheat and Rye Mixed.—Must not exceed 50 per cent. of rye.

No. 1 Red and White Mixed Wheat.—To be sound, dry and reasonably clean, and to include all varieties of soft and white winter wheat.

No. 2 Red and White.—To include all varieties of soft and white winter wheat, to be sound but not good enough for No. 1, and weighing not less than 56 pounds to the bushel.

Mixed No. 2 Red Winter Wheat.—To include hard and soft winter wheat mixed, and in every respect equal to No. 2 soft or No. 2 red hard.

Mixed No. 3 Red Winter Wheat.—To include hard and soft winter wheat mixed, and in all other respects equal to No. 3 red soft or No. 3 red hard.

No. 1 Smutty Wheat.—To be equal in all respects to No. 2 red wheat and only slightly tainted with smut.

No. 2 Smutty Wheat.—To contain all smutty wheat not good enough for No. 1.

No Established Grade of any kind of grain means that it is not good enough for one grade and too good for another, and virtually preserves its identity so that it can be sold by sample.

SPRING WHEAT.

No. 2 Spring Wheat.—To be reasonably clean spring wheat and free from other grain, such as will make sound flour.

No. 3 Spring Wheat.—To include all inferior, shrunken or dirty spring wheat, not musty, and weighing not less than 53 pounds to the bushel.

Rejected Spring Wheat.—To be spring wheat not so badly damaged as from any other cause to render it unfit for No. 3.

Note.—In case of mixture of spring and winter wheat, it shall be called spring wheat and grade according to the quality thereof.

MAIZE.

No. 1 Yellow Maize.—To be sound, dry and only slightly mixed with un-

sound kernels, and to be at least 95 per cent. yellow maize.

No. 2 Yellow Maize.—To be reasonably sound, reasonably dry and reasonably clean, but not good enough for No. 1 yellow, and to be at least seven-eighths yellow maize.

No. 3 Yellow Maize.—To include all other maize not good enough for No. 2 yellow, may be slightly damp, but not so badly heated as to render it unmerchantable.

No. 1 White Maize.—To be white, sound, dry and reasonably clean, may contain an occasional kernel of colored maize, but not to exceed 1 per cent.

No. 2 White Maize.—To be white, sound, dry and reasonably clean, and to contain not more than 5 per cent. of colored maize.

No. 2 Maize.—To be mixed maize, dry, sound, and only very slightly mixed with unsound kernels, and reasonably clean.

No. 3 Maize.—To be mixed maize, reasonably dry, reasonably clean, but not good enough for No. 2.

No. 4 Maize.—To include all other maize not good enough for No. 3, but not so badly heated as to render it unmerchantable.

OATS.

No. 1 White Oats.—To be dry, sound and clean, to weigh not less than 32 pounds to the bushel, and to contain not to exceed 2 per cent. of colored oats.

No. 2 White Oats.—To be equal in quality to No. 2 oats, to be at least 90 per cent. white, and weighing not less than 30 pounds to the bushel.

No. 3 White Oats.—To be at least three-fourths white, not unsound, but not otherwise good enough for No. 2, and weighing not less than 28 pounds to the bushel.

No. 4 White Oats.—To be white oats, may be stained or discolored, but must be sweet, weighing not less than 26 pounds to the bushel, and containing not less than three-fourths white oats.

No. 2 Oats.—To be mixed oats, dry, sound, sweet and reasonably clean, and weighing not less than 28 pounds to the bushel.

No. 3 Oats.—To include inferior or dirty oats, not unsound, but which from any other cause are not good enough for No. 2, and weighing not less than 26 pounds to the bushel.

Rejected Oats.—May be heated or musty, but not otherwise good enough for No. 3.

No. 1 White Clipped Oats.—Must be equal in every respect to No. 1 white oats, and weighing not less than 36 pounds to the bushel.

No. 2 White Clipped Oats.—Must be equal in every respect to No. 2 white oats, and weighing not less than 33 pounds to the bushel.

No. 2 Clipped Oats.—To be equal in every respect to No. 2 mixed oats, and to weigh not less than 34 pounds to the bushel.

No. 3 Clipped Oats.—To be equal in every respect to No. 3 mixed oats, and to weigh not less than 30 pounds to the bushel.

RYE.

No. 2 Rye.—To be sound, plump and reasonably clean, and weighing not less than 56 pounds to the bushel.

No. 3 Rye.—To include inferior or dirty rye, not unsound, but from any other cause not good enough for No. 2.

Rejected Rye.—To be unsound rye, and from any other cause shall not be deemed unmerchantable.

BARLEY.

No. 1 Barley.—To be plump, bright, sound, clean and free from other grain.

No. 2 Barley.—To be reasonably clean and sound, but not bright and plump enough for No. 1.

Rejected.—All barley that from any other cause is unsound and not largely mixed with other grain.

CLOVER SEED.

Choice Clover Seed.—To be bright in color, dry, sound, plump, well cleaned and containing very few foreign seeds, and of uniform quality.

Prime Clover Seed.—To be dry, sound, reasonably clean and only slightly mixed with foreign seed.

No. 2 Clover Seed.—To be merchantable clover seed, but too badly mixed with dirt, brown or foreign seed, or in other respects not good enough for prime.

Rejected Clover Seed.—To include all seed damp or damaged, very dirty, or so badly mixed with foreign seed as to render it unmerchantable.

Mammoth, Alsike and Timothy.—Graded by above rules.

When grain is sold by car-loads without the specific quantity being named at the time of sale, a car-load of each—wheat, maize and rye—shall consist of 500 bushels, and oats, 1,000 bushels.

INSPECTION.

The inspection department shall in no case make the grade of grain above

that of the poorest quality found in any lot of grain inspected, when it has evidently been "plugged" or otherwise improperly loaded for the purpose of deception. Wheat which has been subjected to "scouring" or to any process equivalent thereto, shall not be graded higher than No. 3.

All persons employed in the inspection of grain shall report all attempts to defraud the system of grain inspection as established by law. They shall also report in writing all instances where warehouse men deliver, or attempt to deliver, grain of a lower grade than that called for by the warehouse receipts. They shall also report all attempts of receivers or shippers of grain to instruct or in any way influence the action or opinion of the inspector.

Government Crop Report for August 1.

The August report of the Statistician of the Department of Agriculture shows the following average conditions on August 1: Corn, 87.0; spring rye, 93.7; barley, 79.3; Irish potatoes, 83.9; spring wheat, 96.5; oats, 84.2; buckwheat, 87.2.

The condition of corn (87.0) is 3.5 points lower than last month, 2.8 points higher than August 1, 1897, but 9 points lower than August 1, 1896, and six-tenths of 1 point below the August average for the last ten years.

The principal State averages are as follows: Ohio, 89; Indiana, 86; Illinois, 72; Iowa, 92; Missouri, 86; Kansas, 69, and Nebraska, 85.

The condition of spring wheat (96.5) is 1.5 points higher than last month, 9.8 points above the average on August 1, 1897, 17.6 points above that for August 1, 1896, and 13.5 points above the August average for the past ten years. The conditions in the principal States are as follows: Minnesota, 101; North Dakota, 95; South Dakota, 92; Nebraska, 97, and Iowa, 94.

The average condition of spring rye is 93.7, which is 3.2 points lower than last month, but 3.9 points higher than August 1, 1897, 5.7 points higher than August 1, 1896, and 6.4 points above the August average for the last ten years.

The average condition of oats is 84.2 as compared with 92.8 on July 1, 86.0 on August 1, 1897, 77.3 on August 1, 1896, and 83.7, the August averages for the last ten years.

The proportion of the oat crop of last year still in the hands of farmers is estimated at 6.4 per cent., as compared with 10.1 per cent. of the crop of 1896 in farmers' hands one year ago.

The average condition of barley is 79.3, as compared with 85.7 on July 1, with 87.5 on August 1, 1897, with 82.9 on August 1, 1896, and 86.0, the August average for the last ten years.

The average condition of Irish potatoes is 83.9, against 95.5 last month, 77.9 on August 1, 1897, 94.8 on August 1, 1896, and 87.1, the August average for the last ten years.

The reports as to the apple crop are increasingly unfavorable. Some of the leading apple States report a practical failure, while others report from one-third to two-thirds of an average crop.

The cotton crop report of the Department of Agriculture says: Taking the entire cotton-producing region as a unit, the condition of the crop on August 1 was exactly the same as on July 1, namely, 81.2. This is 4.3 higher than on August 1, 1897, 11.1 points higher than on August 1, 1896, and 5.8 points higher than the August average for the last ten years. During July there was an improvement of 1 point in Georgia, 3 points in North Carolina, 4 points in Alabama, 5 points in Tennessee and Indian Territory, and 6 points in Oklahoma. On the other hand, there was a decline of 1 point in Texas and South Carolina and 6 points in Mississippi, the decline in the last named State being the result of excessive rains. In the condition figures for Louisiana and Arkansas there has been no change. The averages are as follows: Virginia, 94; North Carolina, 90; South Carolina, 89; Georgia, 91; Florida, 87; Alabama, 95; Mississippi, 80; Louisiana, 90; Texas, 91; Arkansas, 93; Tennessee, 97; Missouri, 90; Oklahoma, 98; Indian Territory, 94.

Commercial Fertilizer.

Editor Kansas Farmer.—Commercial fertilizer has proven a success in this county for wheat, and a number of farmers talk of clubbing together to get a car-load. We are quoted prices of \$19, \$20 and \$22 per ton. I desire to ask which kind is best and cheapest for wheat-raising? WILKIE BLAIR. Beulah, Kas.

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

Pure Water on the Farm.

The importance of pure water for the family and live stock is not generally appreciated. In a newly-settled country the danger of defilement of water through filth accumulations in the soil is not so great. As a region becomes thickly populated we may say the danger of water defilement increases with the increase of population and the number of animals kept on the farms or in villages. The danger on old farms and in villages and towns where the problem of sewerage, paving and water supply has not been solved by the corporation, is so constant that not a year passes without outbreaks of typhoid fever, diphtheria or other filth diseases. The farm supply of water is so largely under the control of the farmer, says the Breeder's Gazette, that he is not the victim of the carelessness of his neighbor as is the dweller in the undrained village or town. Hence if the farmer's family is visited with diseases originating in impure water or defective drainage or unclean management of his premises he cannot lay the blame on his neighbors or a mysterious providence. In dairy districts the responsibility of a seller of milk is not limited to his own family. He is in a sense his brother's or patron's keeper. That typhoid fever is so often traced to dairy farms and dairies that supplied the victims of the disease with milk makes the responsibility of the milk-seller broad and serious. The water supply of a dairy farm is very soon contaminated unless more than ordinary care is taken to prevent its defilement. So long as farmers and dairymen sink wells in the barn or barn lots there will be increasing chances of impure water. These wells are too often placed in the lowest part of the lot, where there is least labor in sinking the well. The wall is laid with loose stones and not raised high enough to allow sufficient grading to carry off even the surface water. In a wet time the water level of the well rises from the influx of water from the barnyard and manure piles. After one such soaking of the soil the water from the well becomes a constant danger to the health of animals and unfortunate users of milk from such a dairy. The abnormal rainfall of this spring has carried aged filth into many such wells, and when the dry season comes, and the supply of water is low, the per cent. of filth carried in each bucket of such water is enough to start a pestilence. Such wells are cheap and convenient, we know, but are they safe and cheap, in the long run? The cost of one funeral will exceed the cost of a well-constructed well or filter and cistern.

Whether one shall have a well or cistern at the barn or dwelling is usually a question of first cost. Because of their greater expense, there are few who secure perfect drainage around the home or barn, and trust to providence that the well or cistern may not be defiled. If instead of walling up wells with loose stone we will wall them up with vitrified tile and carefully tamp the ground around them, using clay that will pack well, and in finishing use one or two joints above the level of the land around and then grade up to secure a quick surface drainage for twenty or thirty feet around the well, we can feel that such a well is in all human probability safe from surface contamination. We have one such and find the first cost less than to have used stone or brick. With surface drainage and thorough tamping around each tile as it was put down, we have great confidence in the water. A brother has filtered cisterns that are superior to the average well or cistern. The water is clear and after the first year is free from any flavor of cement. If care is taken not to let in the summer rainfall the water is cold and refreshing even late in summer. Where there is difficulty in getting satisfactory well water the filtered cistern water is the farmer's safest supply. The filter is five by six feet, walled with brick and cemented. A cross-wall is put in of good brick laid in cement. The water filters through this wall and also through the half that is filled with charcoal or clean sand and passes out into the cistern through a four-inch stoneware pipe. The part of the filter receiving the water from the roof is cleaned each fall thoroughly. Such a filter and cistern, nine by twelve, or better nine by eighteen, will give the family a supply of pure, wholesome water and reduce doctor bills and undertakers' expenses.

\$16.05 to Indianapolis and return via Santa Fe Route. Tickets on sale August 19, 20 and 21.

The electric fans now operated in Santa Fe Route dining cars are desirable and seasonable accessories to an already unsurpassed service.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

AUGUST 24—Henry Comstock & Sons, Poland-Chinas, Cheney, Kas.
SEPTEMBER 3—Hornaday, Young and Turley, Poland-Chinas, Fort Scott, Kas.
SEPTEMBER 14—W. H. Wren, Poland-Chinas, Marion, Kas.
SEPTEMBER 28—Wilkie Blair, Red Polled cattle and Poland-China hogs, Beulah, Kas.

HOG CHOLERA CURES.

By John Cownie, read before the annual meeting of the Iowa Swine Breeders.

Mr. President and Fellow Swine Breeders:—While you may consider that an apology is due you for presuming to occupy your time with the discussion of a subject long since exhausted, and while all the time heretofore devoted to this all-important question has been practically wasted and has proven barren of results, still I offer no apology for taking a small portion of your time to sum up, as it were, the results of past experience. And as I have no nostrum for sale which is guaranteed to cure this deadly complaint, the secret of its preparation being locked in my own bosom and only to be parted with for a consideration, you will kindly indulge me for a short time in making a plea for the much-abused animal we all love so well and in whose interest we have met today.

SYMPATHY FOR THE SICK.

The terrible scourge that has of late years swept, as with a besom of destruction, over our land, is of such serious nature as to appal even the stoutest hearts, and I envy no man his feelings who can stand unmoved when he sees helpless animals writhing in the agonies of a cruel death. So-called cures for both swine plague and hog cholera we have without end, some of them, no doubt, compounded by men who have knowledge of their ingredients, both alone and in combination with others; but the great majority of these nostrums are prepared by men whose ignorance of the effect caused by their preparations is only equaled by their audacity and selfishness. The manufacture and sale of these nostrums has of late years proved a profitable business, but not a single hog has yet been cured or even benefited by these villainous concoctions, but instead, tens of thousands of valuable lives have been sacrificed to ignorance and greed. It is not that these so-called cures are only worthless, but they are positively injurious in the great majority of cases, and there is no doubt but the loss of the money expended in their purchase is but a small fraction in comparison with the loss sustained in the destruction of life by the use of poisonous compounds. I am aware that there is a general belief that swine cannot be poisoned or even injured by the strongest drugs, but this belief is absolutely without foundation, swine in many respects being far more susceptible than man himself to the influence of medicine or unhealthful conditions.

SCIENTIFIC RESEARCH.

If we accept the germ theory in regard to this disease, which at present seems to be the only tenable position, we are compelled to admit that any medicine applied through the stomach and of sufficient strength to destroy bacilli in the lungs, the kidneys or other intestinal organs where it may have secured a lodgment, is a menace to life itself, and the chances are that the animal which we seek to benefit will suffer far more injury than the germ we seek to destroy.

At a meeting of the medical profession held last week in Denver, Col., Dr. Murphy, of Chicago, gave to the world a new theory in regard to the cure of consumption of the lungs in the human family by the application of nitrogen gas to the affected parts, thereby destroying the germ and stopping its ravages. Should further researches prove that Dr. Murphy's theory is correct, we may be able to apply the same treatment to our swine, and whenever we can destroy this bacilli without injury to the animal, the victory will be ours. In the meantime, and when our State is practically free from the scourge, would it not be well to take every possible precaution against another outbreak, and realizing that our only safety lies in prevention, apply ourselves with all our might to destroy the bacilli and prevent its propagation? That the disease is communicated from one locality to another is unquestioned, and while we may at times be at a loss to account for the spreading of the germ, we know that contagion in some manner is responsible for the spread of the disease. The burying of the bodies of dead hogs that have died of swine plague or cholera, is a

menace in future for every hog on the farm, and this manner of disposing of the dead bodies should not be permitted. Cremation, thorough and complete, is our only safeguard, and every swine breeder should exert all his powers to enforce and secure this necessary precaution. Cleanliness should be the rule, filth the exception, wherever swine are kept; fresh air and pure water without limit are also indispensable to successful swine breeding. Stagnant water must be guarded against, and a bed composed of fine dust is a menace to the life of a hog that should not be tolerated for a single day. The ground should not be used for feeding purposes, but wherever hogs are kept a plank floor should be provided, and it should be kept scrupulously clean. Swill barrels, pails and feed troughs, the feeding floor and the pens and houses occupied by the hogs, should be thoroughly scrubbed as often as possible with water as nearly at the boiling point as possible, and strongly impregnated with carbolic acid. Fresh lime should be used liberally around the pens and yards, not at irregular intervals, but as often as necessary to destroy foul odors and impart to the premises that sweetness which lime affords at little cost.

SANITARY CONDITIONS.

If we are to eradicate this disease from the land, sanitary conditions must prevail, and it is not sufficient that a few of the most progressive farmers in a locality should labor to this end, but all must unite in a determined and prolonged effort to destroy and prevent the growth of these germs. While I am aware that it is a difficult matter to interest every farmer sufficiently in this work, still those of us who realize the vast importance of this work should never weary in well doing, but by voice and pen, by precept and example, endeavor by every means in our power to enlist in the great work of prevention the thoughtless and the indifferent. It matters not that the best sanitary conditions that can be secured prevail on your farm; a careless neighbor may and often does, through his negligence, propagate and disseminate the germs of swine plague, scattering the seeds of disease among the herds of his neighbors, and through his thoughtlessness, tens, it may be hundreds of thousands of dollars' worth of property may be swept away. This is a serious matter, and I cannot too strongly urge my fellow farmers to give heed in time to the conditions existing, and by every means in their power endeavor to prevent another outbreak of this terrible complaint.

There is an old adage that reads, "In times of peace, prepare for war," and its truth has been painfully evident the last few months, for had our nation been in a position to strike effectively at the proper time, much anxiety, treasure and human life might have been saved, that may now be sacrificed. And in our warfare with the diseases to which our swine are liable, prevention, thorough and effective work at the beginning of an outbreak, may, as in the case of a fire extinguished in its incipency, prevent the loss of property and the spread of disease, and I appeal to every one who hears or reads these words, to lose no time in the use of every means within his power to prevent another outbreak of this terrible scourge. And if there should be the least indication at any time of an animal being affected destroy it at once, consuming the body with fire, and by strict quarantine and every means possible, prevent the spread of the disease. When fires break forth in cities, it is often necessary to blow up buildings with gunpowder to prevent spreading, and in like manner the prompt destruction of an entire herd when it is found to be affected, will prove the most efficient method of preventing further loss.

PREVENTION.

Fully convinced, as I am, that swine plague and hog cholera cannot be cured by administering medicine, I would turn to prevention as our only safeguard, and now is the time to commence, while we are practically free from the disease. The hog industry is of such vast importance to the welfare of our people that to trifle with this matter indicates as much wisdom as to play with fire in a powder magazine, and if I could only reach all the swine breeders in Iowa to-day, and instill in their hearts the absolute necessity of using every means in their power for prevention, the beginning of the end of swine plague and hog cholera in Iowa would be at hand. I am well aware that many instances can be cited where swine were attacked by disease when the surrounding conditions were of the best, and numerous cases can be cited where whole herds wallowing in filth escaped, but in such cases, who can tell where the deadly germ came from, where it was nour-

ished into life, and why it found the condition of one herd more congenial for its propagation than that of another? If we are to succeed in eradicating this germ, we must begin at the very foundation by destroying the bacilli, and this can only be done by united effort, and to this end every swine breeder in the State should consecrate himself.

Fellow swine breeders, I thank you for your kind attention, and my only excuse for occupying your time shall be that I love the hog, esteeming him as one of my tried and trusted friends, who never deceived me, and except when disease struck him down, never failed to respond to demands made upon him. To the hog I owe much of what little success I have made in life, and I am only repaying an old debt when I plead his cause, and urge with all my power that the most strenuous efforts be made by every swine breeder to prevent disease, and insure this great wealth-producing animal immunity from illness during a life that is brief at best. I thank you, gentlemen, for your kind attention.

DISCUSSION.

The discussion of Mr. Cownie's paper brought out a great deal of valuable information. It led that gentleman to give in detail a history of his feeding operations, plans of his feeding floors, arrangements of pens, floors and cribs, and, in fact, all the points of interest connected with the feeding of hogs from the standpoint of one who observes every precaution for the prevention of ill health as brought on by the lack of proper sanitary measures. The discussion was led off by questions from Mr. Meissner, in which he says: "Did I understand from your discussion that hog cholera could originate in filthy pens or filthy quarters of any kind?"

Mr. Cownie—I do not know that it does originate. There are some diseases that are difficult to trace to their origin, and in my experience with swine plague, watching closely cases in nearly every section of the State, I am frank to confess that I have seen as many hogs dying in clean yards as I have seen in foul. A neighbor of mine had been very fortunate in escaping hog cholera; he never had a hog pasture in all his life, never cleaned his hog yard, the sows farrowed in the mud, and I have seen those little pigs when it was absolutely impossible to walk around in the pen, and they stood at their mother's back like tadpoles, and yet did not have cholera. But I remember again when he lost every hog, and he is out of the business now entirely. I cannot account for it. I do not think any one can account for it, but I am thoroughly convinced that if we could induce every farmer to thoroughly clean his premises and destroy the germs, and if we would enforce the strict quarantine we would get rid of hog cholera and plague, but I do not think you can get everybody to do it. I have given that up long since.

Mr. Jeffrey—I was told since I came here to the hotel that the Legislature passed a law last winter prohibiting persons from moving living hogs when disease exists on his place.

Mr. Gibson—The law has always been that. If he sold hogs and had any hogs sick on the premises, that would be taken as evidence that these hogs were diseased without further proof.

Mr. Hossick—Do you think you could convict a man under that law?

Mr. Gibson—I do not know as I could convict him.

Mr. Jeffrey—I thought the law had been after the dead hog.

Mr. Cownie—From my experience with these diseases I agree with our President, and I think with every one of you here who have thought about the matter, that burying should be prohibited absolutely. We did bury some perhaps three years ago when we lost our pigs, the first time I had lost any for thirty-eight years, and I have been in the hog business in Iowa that long; but we did lose our pigs. We buried them and we thought we had buried them deep—four or five feet. We used a yard that the stock was never permitted to enter, for a burying ground, and it has always been kept securely fenced. Last fall when I returned from the State fair I noticed that some hog had been in the yard rooting; there was a hole about three or four feet deep, and in the bottom of the hole I could see the bristles and part of the bones of the dead hog. I watched and found there was just one shoat that had got into the yard and was doing this rooting. I confined him in the yard and kept him away from the others. I really was afraid of the disease again. I closed up the place and emptied about a barrel of lime over it and threw in some posts to keep him from rooting any further. We fed him swill, a little corn and milk, but that pig was sick; you could soon

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see that he had all the indications of hog cholera. Not wishing to assume any risk I destroyed him, and made a post-mortem examination, and all the evidence of swine plague or hog cholera was in the intestines of that hog. I am fully convinced that that pig got the germ from eating those dead hogs. He is the only one that got into the yard, and paid the penalty with his life, and there was not another one in the herd of over 500 hogs affected.

Mr. Niles—How long had the hogs been buried there?

Mr. Cownie—Three years.

Mr. Meissner—While I agree entirely with Mr. Cownie as to burying the hogs, I had a similar experience where hogs had not been buried a year. They were buried by a neighbor. I personally know that my own hogs got out and dug up not less than a dozen of the neighbor's pigs, and there was not any hog cholera from the result. They seemed to be as healthy as they could be, and seemed to thrive on the dead hogs. Then I would like to say one word in regard to the preventives. Good sanitary conditions, of course, we know are necessary, but for each farmer to feed all his hogs on a plank floor and keep clean, I believe is practically impossible, especially under the present conditions. If a man owns a dozen or two dozen hogs, keeps them in a town lot or near to town, it is all right, he may do that; may wash them with carbolic acid and sprinkle lime over them; in our case it would be practically impossible. It seems to me a better way to get at the extermination of the disease would be as soon as hogs are affected in any locality, for our Legislature to pass a law to put those hogs under the strict control of the State Veterinarian. Let the State take entire charge of those hogs and do whatever science sees fit for the extermination of the disease. I think Mr. Niles will agree with me that the germ of hog cholera cannot spontaneously originate; that it must live and live all the time, and if there is a new outbreak in any way that germ has been carried there from some yard in which the germ was alive. If that was the case, good sanitary conditions, while beneficial to the hog, can in no way stop the disease.

Mr. Lytle—Mr. Meissner has just expressed my ideas about the spreading of this disease known as hog cholera or swine plague. I think it is a thing that has been created. It was a creature that was created a good many years ago, and since its creation we have had it among us; it does not need to be created anew, we have got the seed from the beginning and hand it down from year to year, from hog grower to hog grower, right along. As to sanitary conditions, I approve them. I think it is the proper thing to do, but as to their preventing this disease, I think they are far short of having any good results in any way. I think we may just consider that it is a disease that has had its day of creation, and until that time there were hogs grown years and years in large numbers, and there was no such thing known.

G. W. Roberts—Nobody has told me yet, as far as I have heard, when this thing originated and where it came from.

Mr. Lytle—It originated about fifty years ago.

Mr. Roberts—It is just fifty years ago, I guess, since I first had it; fifty years ago next December since my first hogs died with the cholera. Those hogs were hazel-splitters, the kind we first had here in Iowa, and they ran in the timber and over the prairie and everywhere they were a mind to. I got them up in the fall and they were pretty nice for hazel-splitters. They looked well and fed good. I had ninety-three shoats,

and in three weeks I lost eighty of them. Just three weeks they were dying, and they would weigh all the way from 250 down to twenty pounds. It may be that was the first there was, but that is not the first hog cholera I heard of. I heard of it in Missouri before that, but I never heard of it in Iowa until about that time. One of my neighbors lost about seventy-three head, I believe it was, and his hog cholera and mine were very much different. The hogs did not appear at all alike. I must tell you how I cured mine. I was going out one morning to salt my sheep and I found a good fat hog lying dead, and I had my ax along and I cut the pig open and poured the salt in the pig, and any hog that came up and ate of that hog was not sick any longer; it stopped right there. I had hauled wood from the timber and burned every hog that had died up to that time, and it was my purpose in taking my ax to cut more timber and burn the rest of the dead hogs, and I did it. I had thirteen then, that had died in a couple of days, and I piled them on a lot of wood after I had thrown it on the ground and burned the hogs, and the well hogs that were able to eat came up and ate of the charred hogs and charcoal, and I think it did them good. All that would eat of the hog that had salt in it, every single one, got well. I lost just two hogs after that, and they were two that would not eat of the salt and grease.

Mr. Roberts—While it is true that a hog may live in dirt without having cholera, it may eat a dead carcass and

corn on the ground is certainly a filthy practice. It is hurtful. There are times in the winter when the ground is frozen hard, and there are times in the summer when you cannot feed corn in this manner, but as a rule you will lose more corn twice over than would build a feeding floor every year. I would no more think of embarking in the hog business without a feeding floor than I would think of commencing without brood sows. A feeding floor is indispensable to profit in fattening hogs. There is no waste; it can be kept clean, and I am sure I am within the bounds of truth when I say that for twenty-five years, feeding an average of 200 head of hogs every year, with a weight of from 375 to 400, I never once fed those hogs on the floor but what it was cleaned up after the last meal every time. It was a rule as much as it was in the house that the dishes should be washed. It is a small matter, cleaning the floor, and your hogs will appreciate it. There is one thing, if in feeding hogs on the ground you examine the excrement, you will find it deep black and coarse. Feed your hogs on a board floor and keep it clean and the droppings will have the color and consistency of well-made mush. Whenever I see the droppings of my hogs hard and black I know there is something the matter. We never have that difficulty when the hogs are being fed on and confined to a floor; it is only when they are running out. There is not a farmer to-day in the State of Iowa, there is not a feeder, no matter how large, but will find it prof-

would like to have it in the face of a hill, so that in shoveling off the manure or cobs I would have plenty of space without piling up to the level of the floor. If this is done you will economize corn and time in feeding and you will have better results.

Mr. Lytle—Do you allow your hogs to get under that floor?

Mr. Cownie—No, sir.

Mr. Hossick—How about a cement floor?

Mr. Cownie—I would not have it; it is cold and expensive. You would have to have it on the ground, and I want it elevated. Plank is far cheaper. I have a plank floor—two-inch plank—I have had in use for fifteen years. It needs repairing now with a new one. The knots do not wear down and the soft parts of the wood will wear out and it is difficult to get clean. We have turned the planks over and both sides are pretty well worn.

Mr. Scott—What eats the waste corn that goes through?

Mr. Cownie—There is none that goes through.

Mr. Lytle—In dry, hot weather will not the planks shrink?

Mr. Cownie—Yes, sir; but if you use it every day the manure will get between the planks and make it tight. If you do not use it in the summer time they will shrink up, but if you use it all the time you will never have any difficulty.

Mr. Howard—Do you disinfect on the plank floor?

Mr. Cownie—We sprinkle it with car-



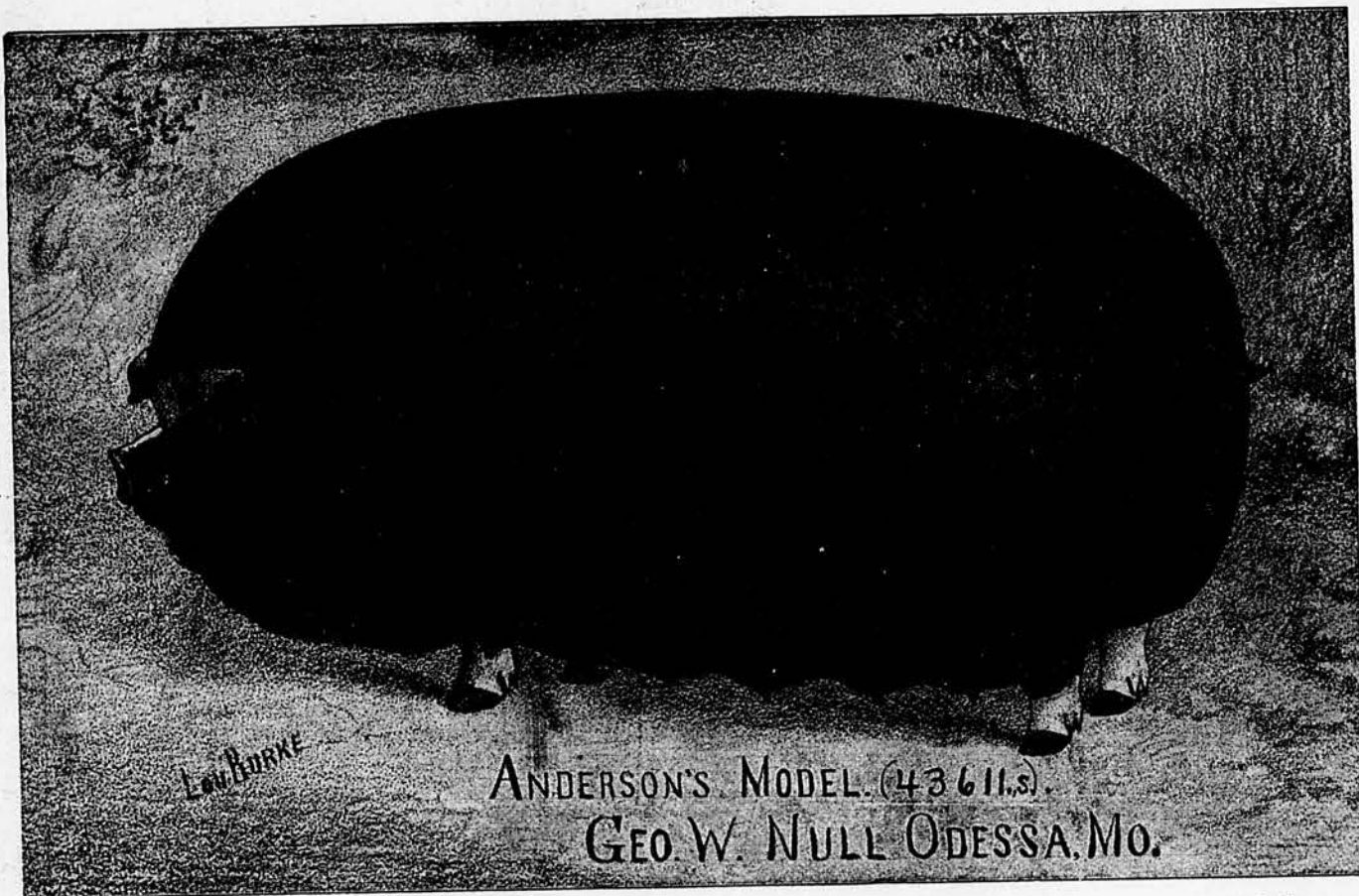
It isn't much trouble for a really healthy man to be good humored. Jollity and exuberant health are a proverbial combination. The hearty man who is always laughing doesn't have any trouble with his digestion. It has been said that laughing makes people healthy. The truth is that health makes people laugh.

It is impossible to estimate the tremendous influence of health upon human character. A man with a headache will not be in a happy, contented frame of mind. A man who suffers from a weak stomach and an impaired digestion will sit and grumble through the best meal ever prepared. A bilious man who is not a bore, is deserving of a place in a museum. A nervous man who is not petulant and fault-finding is a curiosity. All these conditions lead to grave diseases, when the victim becomes not only disagreeable, but dependent as well. A wise wife will realize that while the old saying that a "man's heart is in his stomach," is not literally true, it is a fact that his stomach sweetens or sours his character according as it is healthy or unhealthy. Dr. Pierce's Golden Medical Discovery is the best of medicines for the conditions described. It makes the weak stomach strong, the impaired digestion perfect, invigorates the liver, purifies and enriches the blood and tones the nerves. It tears down half-dead, inert tissues and replaces them with the firm muscular tissues of health. It builds new and healthy nerve fibres and brain cells. It dissipates nervousness and melancholy and imparts mental elasticity and courage. It is the best of all known medicines for nervous disorders.

"Through your skillful treatment I am once more a well man," writes J. N. Arnold, Esq., of Gandy, Logan Co., Nebr. "I suffered for years and could not find relief until I commenced taking your 'Golden Medical Discovery.' I suffered with constipation and torpidity of liver which resulted in irritation of the prostate and inflammation of the bladder. I had only taken one bottle when I found great relief. The medicine has effected a permanent cure."

dation for disease. And he should know the history of all his brood sows in use, so they will be no kin to boars in use. Buying from a distance cuts no figure in these days of rapid transit, as breeders are dealing with each other, from ocean to ocean, and some from Europe and other countries. I will give an example that came under my observation not long since: A farmer of more than ordinary intelligence and ability came to look over my herd, and told me he bought a boar of a breeder close by, two years ago. He was a fine pig, got lots of pigs and large litters, but pigs were weak, fine-boned, with no constitution, and gave him no satisfaction at all. Of course, last spring was wet and against the pig business, but I think here is the secret of it all: He bought at different times sows and a boar of a good breeder not far from Topeka, and this same boar spoken of was out of a fine sow bought of same breeder, and his sire was out of a sow at State Agricultural College farm, she bought of this same breeder. Now, I know these all to be fine individuals, but such breeding as this, no matter how good the foundation stock, will end disastrously. Therefore, I say, always require a pedigree, unless crossing on stock of opposite blood, and my experience tells me this is the course for the ordinary farmer to pursue. But never make but one cross, always using pure-blooded males and good sows. But you can have just as strong, vigorous hogs of any breed, and can breed in line at that, but you can only do so by intelligence and care, keeping off at least three generations. Of course in-breeding is done occasionally by scientific breeders with good results. But all will admit that it is a dangerous practice. I am sure there is a great deal of in-breeding done ignorantly among farmers using Poland-Chinas, as that is the hog that predominates in the West, and that is where we have cholera most. This is why, I claim, cholera is bred on many farms and why the Chester and other breeds are more exempt, not because they are so much stronger constitutioned, but their numbers are less, especially in the West, and not so generally bred by the farmer. I consider this subject of much importance to breeders, especially of Poland-Chinas, as breeders are often condemned by a farmer when he is really to blame himself. Hoping to hear from others on this subject in the future, I am, yours truly, Wamego, Kas. C. J. HUGGINS.

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.



not have the cholera, yet I should be very sorry for it to get out into the world that the swine breeders of to-day were trying to argue for filth and corruption. I have been told by a man that hog cholera has been here ever since the devil went into the swine and they went down into the sea, and that has been about 1,800 years; that is about as correct as we know anything about it.

Mr. Cownie—I would like to say one word in reply to Mr. Meissner in regard to the practicability of having feeding floors for hogs. He says that those that live near town and keep ten or twelve hogs may have a feeding floor, but for farmers who have a large number it is impossible. While I do not know what you would call a large number, I have had 600 or 700 on my farm often and we feed on a feeding floor. I do not know of any reason why if a man had 2,000 or 3,000 he could not have feeding floors. I am sure it is much superior to throwing corn in the mud, and I agree with Mr. Roberts that this impression getting out that we fed our hogs in filth and dirt is one of the causes for low prices in hogs. It is coming, it is prevalent in the East. Only a short time ago I read an article written by a minister of the gospel who described feeding hogs in the West. He said that we did not feed on floors and that one lot of hogs was fed on the excrement of others, and it passed this way, he said, through ten different lots before it was finally thrown to the compost heap.

A member—He was not much of a liar for a preacher, was he?

Mr. Cownie—Not much. But feeding

itable to provide himself with a feeding floor and make it a rule to feed all his corn upon that floor. And when you come to feed swill, it is far better to have your troughs upon a level floor that you can scrape off and clean than to have them sitting around on the ground in mud a greater part of the time.

Mr. Lytle—Tell us how you construct your large feeding floors.

Mr. Cownie—If I was going to turn this hall into a hog house, I would have pens on each side and an alley in the center. I would have a floor on the outside of my building about sixteen feet wide. I set cedar posts about three feet high and put a 2x8 joist and set the posts four feet apart, and joists four feet apart for sixteen-foot plank. Then lay the plank from the building running out so that everything can be run down and pushed down easy, with a fall of four inches, so that the water, when it comes off the roof, will wash it off. We put a tight fence around it, about three feet and a half high—make it close. Then from the yard we have a small gangway for the hogs to come in. If we feed swill to our pigs or feed corn we have the swill in the troughs and corn on the platform before a single pig is admitted. I pity a farmer when I see him with a pail of swill in each hand, dodging around until the pails are upset and the pigs lose their swill. We have no trouble with that; we have the swill put in troughs and the corn on the floor beforehand.

Mr. Lytle—You set your floors up above the ground a little bit?

Mr. Cownie—Yes, about three feet. I

bollic acid and sprinkle slacked lime over it every once in a while. We clean it with a wooden hoe. You can push it down clean, three or four planks at a time. Have your hoe about three or four feet in width, and then throw whatever refuse there is over the fence. It is very easily cleaned. By putting a small piece of sheet-iron on the face of the hoe it prevents it from wearing and it will clean like a broom. In winter it is necessary that you do it immediately after feeding, so that it won't freeze, and then the floor is ready for the next meal. Place the corn on the floor before you admit the hogs, open the gate, and there is no difficulty in feeding. I use a sliding door. We have one of those doors that you buy at a hardware store for 15 or 20 cents, and I have holes bored in the 2x4 studding on which the door slides up and down, and when I want to feed my little pigs first, I raise it up until it is about five or six inches; all the pigs that can get under there come and feed. Then I raise it up an inch or two more and put in more feed, and the next sized pigs come in, and the little ones will make their way out very quickly; they have enough and they will work their way in between the others and get out; they do not have to be driven.

Breeding Points for Farmers.

Editor Kansas Farmer:—Regarding pedigree, should a farmer exact a pedigree of all animals bought for breeders if he is only interested in raising hogs for the market? I say "yes," if he wants a strong, vigorous herd, and lay no found-

Sheep Department.

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

Fodder Shredder.

At the annual meeting of the Improved Stock Breeders of Kansas, at Topeka, Mr. King sprung the question of feeding shredded fodder to sheep. We have just had some very important evidence upon feeding Kaffir corn to sheep, in this department, and hope for more of it, but the shredded fodder question has not yet been answered. An enormous amount of corn fodder in this State could be shredded if it is of value as a feed for sheep. As I have said before, I have gone to a large expense to get machinery made that will enable me to test this, but I want some one else to try it also. My machinery arrived last week and made four wagon-loads, weighing in all 4,000 pounds, with a \$40 freight bill to pay. I have still got to buy a \$40 belt, then I will be ready to test the corn fodder. I have not yet set up my machine, but will do so soon, and will give particulars later on. The power is a three-horse level tread with governor, and the corn fodder or Kaffir is first crushed between two feed rolls, then cut beveling in one-fourth inch to two-inch lengths by the cutter, then passed through a regular thresher with cylinders, concave and vibrating sieves, which will take out and clean the grain while the fourteen-foot swivel carrier will stack the cut fodder.

Sheep Notes.

Culls and poor sheep will be eagerly bought up by feeders in the big markets, as sheep are scarce.

This month is the month to ship to market all the surplus stock. All stock over 4 years old should be sold, also all culls and lambs that are not wanted to be kept.

I am receiving many calls for sheep. Buyers should write to those who advertise in this paper, of whom there are a half dozen in the last issue. I have no sheep to sell, so it is useless to write to me.

A breeder wants to know how to register a ram in the "Shropshire Register." Write out the ram's pedigree and send it, with a dollar, to Mortimer Levering, LaFayette, Ind. For \$5 you can join the association, if you can furnish reference, and to members the registry fee is only 50 cents. So, if you have ten or twenty to register, it is cheaper to join the association.

We have had a very cool summer this year, which has been very good on sheep. Only a few times have the sheep sought shade at mid-day. I have an acre in walnut trees in my pasture and the sheep visit this shade every morning, but never at noon, and when the heat becomes too great they always come up to their shed for protection from the sun and the flies.

During the heat of the summer the sheep are bothered by a fly that tries to lay its eggs in their nostrils, and if it succeeds the sheep have what is commonly known as "grub in the head." Right now is the time to protect the flock from these flies. The best known remedy is pine tar on their nostrils, and the handiest way to apply it is with a brush while the sheep are forced through a narrow chute made for this purpose or for sorting out sheep.

When shipping, remember that there is a special rate on sheep that makes a car come several dollars less than cattle or hog cars. Many think the railroad company simply charge for hauling the car, and charge as much for one as another. This is a mistake; a sheep car goes at a less rate per hundred with a minimum weight limit. It will pay to ship as small a number as fifty, if they are good ones. Last year I shipped sixty-eight and there was room for many more, and my freight bill was only 17 cents per hundred pounds.

Cool and comfortable dining cars on Santa Fe Route are obtained by use of electric fans.

\$16.05 to Indianapolis and return via Santa Fe Route. Tickets on sale August 19, 20 and 21.

FREE.—How to keep hogs and poultry healthy and rid them of all diseases. Address, National Stock Remedy Co., Columbus, O.

\$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.

Gossip About Stock.

Attention is called to the advertisement of the Glendale Short-horns, C. F. Wolf & Son, Ottawa, Kas., proprietors, in another column.

Mr. Geo. W. Barnes, of Valencia, Kas., places his card in this week's Farmer. Mr. Barnes is widely known as a breeder and salesman. He advertises in the latter capacity. It will be to the interest of any who contemplate making public sales to correspond with him. His terms are very low.

M. W. Dunham, owner of the Oaklawn farm, Wayne, Ill., sailed from France the 4th inst. with seventy head of French horses. He cables that he was fortunate enough to secure a very large proportion of the prize-winners at the Concours Hippique Percheronne, the leading show in France.

D. L. Button, the northern Shawnee breeder of Chester White swine, reports that he has some nice young boars and sow pigs, farrowed about the 1st of April, out of registered sows and sired by D. L. Boy 7757 and Bright L. 10083, which he wishes to dispose of. Has also some cracker-jack September and October gilts which are bred to a son of Eclipse 2d, due to farrow about the 1st of October. Write him for what you want. Prices reasonable.

F. P. Maguire, of Haven, Reno county, Kansas, is rejoicing in the fact that his herd of Poland-China swine are in finer condition than ever before. He has granddaughters of Klever's Model bred to a son of old Black U. S. His Klever's Model boar was purchased before there were any doubts as to the whereabouts of the grand old animal whose offspring are prized so highly, and his Black U. S. was farrowed before the original Black U. S. died, so that he knows his animals

and all were in excellent condition and actually an all-round better lot, both as to breeding and finish, than any heretofore offered by any of this quartette of successful breeders. Col. S. A. Sawyer will do the work on the block. Parties from a distance will find free accommodation at the Tremont hotel, at Fort Scott.

One of the earliest established Short-horn herds and one of the very best in point of blood and individual excellence in all the West, is the Norwood herd, founded in 1865 by its present owner, Mr. V. R. Ellis, of Gardner, Kas. A very material compliment was paid this veteran breeder and his herd when Senator W. A. Harris purchased of Mr. Ellis his well-known herd bull, Godwin 115676, for use at the famous Linwood farm. To inspect the Norwood herd is to be convinced of the superior finish and feeding quality of the roans. Altogether the herd numbers forty odd head, a dozen or more of which are the mellow-fleshed, richly-coated roans. The writer has not seen such uniform quality in any herd and congratulates its proprietor upon his success in bringing the herd up to its present standard. To take the place of Godwin, the yearling Cruickshank bull, Sir Charming 4th by Imp. Solamis, dam Sweet Charity by Band Master, second dam Imp. Charity 3d, was secured from C. C. Norton, Corning, Iowa. He is a red, very smooth, mellow and meaty, close to the ground and has good style. This bull should make a fine showing at the head of the Norwood herd. The Lady Elizabeth family has twelve representatives, seven of which are roans. Of this strain is Grace Greenwood 7th, a three-year-old (roan) by Gold Dust. She is a show cow, having wonderful spring of the ribs (a noticeable characteristic of the herd), per-



NEEDED ON EVERY FARM.

A good mill that will grind every kind of grain is a necessity on every farm and ranch. There are so many uses to which it can be put. No farm is quite complete without it. The Dain Double Geared Mill grinds any kind of grain twice as easily and twice as quickly as any other mill on the market, being so constructed that the inside burr revolves twice to one revolution of the sweep. The pressure between

the burrs in grinding is carried on chilled roller bearings, reducing friction to the minimum and doubling the quantity of grist with the usual draft. There is no comparison between the Dain Double Geared Mill and any other mill for capacity or ease of operation. Thousands of satisfied users testify to its superiority. If you are not familiar with it send your name and address for circulars and illustrations to Dain Mfg. Co., Carrollton, Mo.

belong to the real "400" in Poland-China society.

The public sale announced for Wilkie Blair, on September 28, will be held at Girard, Kas., and not at Beulah, Kas., as mentioned in the list of sales on page 2. The sale will be of Poland-Chinas exclusively, although Mr. Blair will exhibit at the sale booth some of his fine Red Polled cattle. The sale offerings will be by Blair, McDonald and Wampler, all of whom have fine herds in Crawford county, and have been engaged in the business of swine breeding for many years.

One of the strongest offerings of pedigreed Poland-Chinas ever made in Kansas will be made at Fort Scott, on Tuesday, September 6, when over sixty head will be sold to the highest bidder. Four well-known breeders have joined forces in this sale and will demonstrate to those who attend that as well-bred and judiciously grown out animals can be had on Kansas soil as may be procured in any State in this Union. The sale catalogue, a free copy of which may be had by writing for it, gives all the necessary information concerning the breeding and worth from a breeder's standpoint. Many readers of the Kansas Farmer are already acquainted with B. R. Adamson and Grant Hornaday, both of Fort Scott, Kas., also with J. M. Turley, of Stotesbury, Vernon county, Missouri. The fourth consignor, Mr. Joseph R. Young, whose farm lies near Richards, Vernon county, Missouri, has been very successful with Poland-Chinas for ten years. He has already been an equal promoter of two very successful public sales, both of which were the equal of any held in Missouri during the past year. The reader interested in up-to-date Poland-Chinas need not hesitate, after consulting the sale catalogue, about sending bids on any animal whose pedigree is found in the catalogue. The writer made a late visit to all four herds

happens a trifle under size, but finished at both ends, extremely close to the ground and of fine quality. The most prominent among the Rose of Sharon, of which there are several, is Duchess 39th by Barrington Duke of Hildale 49366. She is the dam of two Godwin heifers—Norwood Duchess and a roan heifer calf, 2d Norwood Duchess. Both are extra good. The Young Mary family has also some worthy representatives. At the Linwood dispersion sale Mr. Ellis bought 11th Linwood Golden Drop, which soon after dropped a bull calf, Laird of Linwood, by Galahad. Laird is now owned by T. P. Babst and assists Lord Mayor at the head of Valley Grove herd. The dam is by Viking out of the 8th Linwood Golden Drop by Craven Knight. The latter cow is dam also of Gallant Knight, recently illustrated in the Farmer and head of the Elder Lawn herd of Dover, owned by T. K. Tomson & Sons. The 11th Linwood Golden Drop has a lusty roan bull calf by Godwin which is exceptionally fine. Mr. Ellis has several young bulls fit for service that are of his best breeding. Maintaining, as Mr. Ellis does, that "he who improves his domestic animals from year to year is a public benefactor," it is not strange that his herd is of high character.

Anderson's Model.

We are pleased to present the picture of one of the finest Poland-China sows now in existence. She is claimed to be the highest-priced sow and dam of the highest-priced litter of pigs on earth. She farrowed a fine litter of pigs again on August 8, 1898, numbering ten, which are sired by the great 1897 yearling winner, Chief Perfection 2d. This is Anderson's Model's third litter. In the first were twelve pigs, in second were eleven, and in the third ten, as above mentioned. Of the first litter she reared eleven, in second ten and of this third

litter he retains every one. No sow ever had a better motherly record than that. The happy owner of this model animal is George W. Null, of Odessa, Mo., and he will offer at public sale some of the finest animals of his most excellent herd on August 25, 1898, at Elm Lawn farm, Odessa, Mo. Write him for catalogue and information concerning the sale. See advertisement on page 16 of Kansas Farmer.

Publishers' Paragraphs.

Active men, strong men, full of vigor and nervous energy, find in the outings of summer the relaxation which they most need. They find also the best tonic in building up the system in open air exercise, which in summer only can be freely enjoyed, but there may happen at any time, an accident to limb or frame whereby the flesh is badly bruised and per chance the face disfigured. That simply reminds us that there is one thing which in summer outings we ought always to have about us, and that is St. Jacobs Oil, the promptest and best cure for bruises that is known to sportsmen, athletes and seekers of outdoor pleasures. Have it handy and it will stand by you for a good cure.

THE STAMMERING HABIT.—Few persons are aware that there are in the United States upwards of 200,000 persons addicted to stammering—of which number about 165,000 are male and 35,000 female. A paper called The Phonometer exclusively devoted to the interests of this unfortunate class of sufferers is now in circulation and is published at Detroit, Mich. This paper is a regular monthly publication edited by Geo. Andrew Lewis who himself was a most inveterate stammerer for more than twenty years. Mr. Lewis is also founder of the well-known Lewis Phonometric Institute, a school for stammerers and probably the largest and most successful institute of its kind in the world. To any reader of this paper who will send 6 cents to cover postage Mr. Lewis will send free of charge an interesting book of 145 pages giving full particulars regarding the origin and treatment of the stammering habit. Address, Geo. Andrew Lewis, Adelaide street, Detroit, Mich.

A hen that would travel "overland" a few hundred miles while attempting to "hatch out" a dozen or more chicks would hardly be successful in her undertaking. On July 25, 1898, Kansas Farmer received a letter from M. M. Johnson, proprietor of the Sure Hatch Incubator manufactory at Clay Centre, Neb., saying that he would start out from home in a few days and drive to Topeka with his incubator in full working order. That he would visit a number of places along the route in Nebraska and northern Kansas, and would reach Topeka August 11, and the chicks would be coming out of their shells on that day. He seemed confident about results, because he knew the machine that was doing the work. On the morning of August 11 he appeared in Topeka and invited Kansas Farmer to step to his wagon and see the rising generation of poultry. The invitation was accepted and the chickens—lots of them—were breaking out of their shells and calling loudly for their first breakfast. A machine that can be counted on to do such good work while traveling is worth investigating. Write the manufacturer for further particulars.

Electric fans to keep you cool are new and timely features of Santa Fe Route dining cars.

Grand Encampment, Knights of Pythias and Supreme Lodge Session, Indianapolis, Ind., August 22-29 and August 30 to September 10, 1898.

Round trip tickets on sale at Santa Fe Route ticket offices August 19, 20 and 21 for \$16.05, limited to August 30, with provision for extension to September 10. Depot 'phone 682; North Topeka 'phone 364.

G. A. R.

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.

The Home Circle.

THE FARMER'S DAUGHTER.

You should see her
In the kitchen,
Cap and apron,
White as snow,
In her eyes
The love-light shining—
On her cheeks
A rosy glow.

Sleeves rolled up
Above white elbows,
Sweeping here
And dusting there,
This fair daughter
Of the farmer
For the household
Hath a care.

And her song
Is just as tuneful,
And her step
Is just as light,
As when she,
Sweet merry-maker,
Joined her mates
In play last night.

Oh, the little
Farmer's daughter
(Heaven bless her
As she goes.)
She is fairer
Than the lily,
She is sweeter
Than the rose.

—Mrs. M. A. Kidder.

THE DEATH OF SOMERS.

It was soon after the burning of the Philadelphia that Commodore Preble, in charge of the American ships in the harbor of Tripoli in 1804, figured out a scheme for further harrassing the enemy by sending a fire-ship and exploding it among the shipping. The ketch Intrepid, which had served so admirably in the Philadelphia expedition, was selected for this new service and the sacrifice. She was loaded with 100 barrels of powder in bulk, 150 fixed shells, and a lot of old iron to be hurled in every direction among the enemy's ships when the explosion took place. It was the intention to send the ketch in as a blockade runner, and when she had reached the center of the fleet of ships in the harbor have her crew apply the torch to the powder train and make their escape before the explosion came. Two small rowboats were fastened to the ketch to facilitate the escape, and small vessels followed, as Powell did after Hobson, to pick up the crew after their work was done.

The glory which had fallen to Stephen Decatur and his men for the burning of the Philadelphia had inspired the entire American fleet with a desire to do something to share the record for bravery, and when the call came for volunteers to go on the Intrepid there was almost as great an embarrassment of riches as when 4,000 men presented themselves to go on Hobson's hazardous errand.

Master Commandant Richard Somers, who was chosen to command the ketch, wanted but ten men, with Midshipman Henry Wadsworth, second in command; but just before the start they found a stowaway—Midshipman Joseph Israel. He was more fortunate or less fortunate—whichever it may be—than Hobson's stowaway, for he was permitted to go. Every man in the crew knew the peril of the venture, and they all declared they would never be taken alive. Before the departure Somers removed from his finger a gold ring, and breaking it into three pieces gave one to Decatur and another to Master Commandant Charles Stewart. The third piece he kept. The pieces given away were to be preserved as mementos in case Somers did not return. The men in the crew disposed of their effects as they would have done had they been going out to be shot.

It was on the night of September 4, 1804, that the Intrepid and her intrepid crew left the rest of the American fleet and sailed away through the fog toward the Tripolitan gunboats. Three small cruisers—the Argus, Vixen and Nautilus—stood over toward the harbor with her in order to cover her retreat should she be assailed before entering. The crews of these vessels silently watched the ketch fade away in the misty gloom. They had taken farewell of the daring band and never saw them more. The last glimpse they had of the ketch before she blew up was as she glided like a dark shadow between the Tripolitan gunboats. But, unfortunately, her presence there was discovered by the enemy too soon to make it possible for the crew to get away with their lives. A signal was fired from shore, and in an instant almost every gun that could bear on the stealthy intruder was blazing away for all it was worth.

At that moment the crew of the Nautilus saw a lantern passing along what they supposed was the deck of the Intrepid, doubtless carried by some member of the little boat's crew. It paused at the midship hatch, over the spot where the powder was stored, and then

dropped out of sight. The next instant there was a flash that lit the sky, and a stream of flame shot up from where the lantern had disappeared. A shock that made every ship in the harbor quiver and a roar that startled the astonished Tripolitans into trembling fear told all too plainly what had happened on board the ketch. While the echoes of the roar were still resounding splinters of timber and fragments of shell were heard dropping into the water in all directions around the spot where the explosion had occurred.

All through the night the American sailors cruised about the mouth of the harbor in the hope of picking up some of their daring comrades who had been lucky enough to escape, but their search was in vain. Pieces of the bodies of white men were found in the harbor when daylight came, and fragments of clothing were found even upon the shore. Nothing, however, was identified as belonging to any of the crew. They had been literally blown to pieces. So had some of the ships of the enemy, and others were badly shattered. Just how it all happened never was known and never can be, but it has always been supposed that Somers, finding his expedition discovered, deliberately fired the mine and destroyed himself and all his men rather than fall into the hands of the enemy.—Chicago Times-Herald.

The Girl and Her College.

"It is sometimes argued that the college unfits a woman for domestic life," writes Edward Bok in the August Ladies' Home Journal. "That is true, I think, only so far as the girl can or cannot adapt herself from one condition to another. The difference between the college and the home is simply the difference between all training and real work in the world. If a college course is rightly understood and taken advantage of, it will prepare rather than unfit a girl for the wisest government of a house. If she has used her time and opportunities at college well, her training of system and discipline will prove of the first importance to her in conducting the domestic machinery. Aside from the direct application of her training to her work, she has the great advantage of resources of mental refreshment when moments of leisure come to her. The domestic courses, now being so generally introduced into the curriculum of our girls' colleges, also give a practical value to a college education for a girl which it did not possess a few years ago. The value of these courses lies in the foundation which they give a girl to build upon.

"All things being equal, a college training is unquestionably a source of inestimable value to a girl, as it is to a man, and she is the better equipped for her duties of wife and mother because of it. Knowledge is always valuable. Yet it does not, by any means, follow that a girl, unable to go through college, is at a disadvantage with her girl friend who did. Where it is feasible and possible it is an excellent part of a girl's equipment, and its advantages will come back to her a thousand fold in her future years. But in the majority of cases a college training is not feasible nor possible. If going to college simply means to a girl's mind the fun to be had, it is infinitely better that she should remain at home. If a girl is inclined to be selfish, and hungers simply for a brilliant career, it is wisest that the softening influences of a home remain her portion. If she is physically not strong the home care is a thousand times better for her than the best care she can procure at any school or college."

Col. Theodore Roosevelt.

Perhaps nothing has shown the wonderful adaptability of the average American more than the way in which the men of the greatest differences in training, birth and condition, drawn with an impartial estimate of fitness from all over the country, and now composing the already historic "Rough Riders," have been able to sink every consideration of personal preference or habit to join heartily in the spirit of discipline and daring which has brought the troop to its present condition of effectiveness. From the cowboy, whose feats in the saddle have been the admiration of a border people who have known the Apaches, to the college man who has been cheered from the "bleachers" for his track athletics, we believe a large span may be fetched; but the unanimity of spirit and high patriotism prevailing throughout the troop has brought them together shoulder to shoulder, man to man. This is rarely fine, and preaches a whole religion for the success of what is best in our republic. When one inquires what centralizing force has been able to bring this singleness of aim about, the an-

swer is unavoidable that it has been the convincing personality and charm of Col. Theodore Roosevelt.

Since Theodore Roosevelt graduated from Harvard in 1880 he has played many parts. In political life he has been a New York State Assemblyman, United States Civil Service Commissioner, Police Commissioner of New York city, and Assistant Secretary of the Navy. In literature he is well known as the author of several historical works, and descriptions and stories of Western frontier life.

When Roosevelt organized his troop



COLONEL THEODORE ROOSEVELT

the President offered to make him a Colonel, but he declined the commission. "I am not fitted to command a regiment," he said, "for I have had no military training. Later, after I have gained some experience, perhaps that may come." It has come now, and also recommendation for the medal of honor for gallant conduct in action.

Pictures of the Rough Riders and the other forces that took part in the siege of Santiago, from photographs taken during the engagement, will be found in the Santiago (July 30) number of Harper's Weekly.

An Apache's English Talk.

Just at present the men most talked about in Cincinnati are the officers of the Sixth infantry who went down before the awful rain of Spanish bullets at Santiago, and to many of their friends who were accustomed to meet them at the Gibson House, which was the headquarters of the officers when on this side of the river, it seems hard to realize that several of the best ones are dead. Lieutenant Ord's death has occasioned particular regret. He was the son of General Ord, of the regular army, and wished to adopt the profession of arms, but was unable to get an appointment to West Point. He enlisted in the ranks and won his commission in that way. As a cavalryman he had a great many adventures, serving in a number of Indian campaigns.

It was when he was a Sergeant and was with General Miles in the campaign against Geronimo that he was detailed to carry dispatches from Miles to one of the officers commanding a body of troops that had been stationed miles away to head off the Indians' retreat. The assignment meant that he must ride miles and miles across the desert, and run a chance of being caught by Apaches, but he seemed delighted when he was selected. Just as sundown came he mounted his horse and started on his dangerous mission. On, on, he rode until midnight over the seemingly end-

less, arid track. Suddenly he heard what he thought was a human voice; then he thought it was only the crunching of the sand as his horse's hoofs sank into it. Then he rode on a little further, and still he thought he could hear the voice. Stopping his horse, he dismounted and listened.

Sure enough it was a voice. Taking off the blue flannel army shirt that he wore he tore it into strips, with which he wrapped the hoofs of his horse in order that the sand would not crunch when the animal walked, and started cautiously toward the sound, which was barely audible and nearly a mile away. Leading his horse, and with his carbine ready for instant action, he started ahead, and as he came nearer he could understand that the owner of the voice was singing. Working nearer and nearer, he was able to distinguish the words, and fancy his surprise when his ear caught the words of "Oh, How I Love Jesus." Out in the middle of the desert, miles and miles away from any white man, the words of the song floated to him clear and strong. At first he thought he had the fever that comes to men when they ride too far without rest over the sand, but there could be no mistaking the song; it was no delusion, it was real. Ord at once suspected some Apache ruse, and, hobbling his horse, started to crawl toward the spot where the song came from. Throwing himself flat on his stomach he worked his way along behind cactus and other bushes until he was within a short distance of the spot. All the time the singing kept up, but it was evident the singer was not familiar with the song. All that he sang were the few words of the chorus, "Oh, how I love Jesus," continually repeating them.

After crawling for more than an hour Ord came to where he could see that the singer was an Apache, sitting in the middle of some cactus bushes. For a long time Ord watched him, and all the time the Indian kept repeating at the top of his voice, "Oh, how I love Jesus." Finally when he became satisfied that the Indian was alone Ord covered him with his carbine and rushed at him, ordering him to surrender. The Apache threw up both hands and made the sign of peace, continuing to sing, "Oh, how I love Jesus."

The Lieutenant took the Indian back to Gen. Miles' camp, where it was learned through the interpreter that he had been sent out by one of the Apache chiefs to say that the Indians were ready to treat for peace. He was the only Indian in that party who could speak a word of English, and all that he could say was, "Oh, how I love Jesus," which he had learned from a missionary. Hence he was sent out to meet the white men, and seating himself in the desert growled forth the few words he knew until Ord came along.—Cincinnati Enquirer.

Inquiry.

Editor Kansas Farmer:—I would like to inquire of some reader of the Kansas Farmer, through the columns of your paper, for a reliable home-made toilet soap recipe. Desire full directions for perfuming and coloring.

Beulah, Kas.

M. L. BLAIR.

Free to all Women.

I have learned of a very simple home treatment which will readily cure all female disorders. It is Nature's own remedy and I will gladly send it free to every suffering woman. Address Mabel E. Rush, Joliet, Ill.

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 DIARRHŒA. 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 Young Folks.

IT'S THE THING YOU LEAVE UNDONE.

It isn't the thing you do, dear;
It's the thing you've left undone
Which gives you a bit of a heartache
At the setting of the sun.
The tender word forgotten,
The letter you did not write,
The flower you might have sent, dear,
Are your haunting ghosts to-night.

The stone you might have lifted
Out of a brother's way,
The bit of heartsome counsel
You were hurried too much to say;
The loving touch of the hand, dear,
The gentle and winsome tone,
That you had no time or thought for,
With troubles enough of your own.

For life is all too short, dear,
And sorrow is all too great
To suffer our slow compassion
That tarries until too late;
And it's not the thing you do, dear,
It's the thing you leave undone
Which gives you a bit of a heartache
At the setting of the sun.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 34.

REMAGEN.

Leaving poor Roland and Hildegunde to take care of themselves, we resumed our bicycle procession and went our way rejoicing through several little villages, until we arrived at Remagen, which is known for its pretty church and also as being the place where are located the head offices of the Apollinaris Water Company. This little village was in existence nearly 2,000 years ago, for it is mentioned in the Pentinger map of Roman roads, and Roman mile-stones set up by Mr. Julius Caesar himself have been found near here at various times.

I never knew from what source the Apollinaris mineral water received its name, but here I was fully informed on the subject.

Caius Sollius Apollinaris Sidonius was a renowned Christian writer and a bishop, who died about 482 A. D., and he was then made a saint, and placed in the catalogue as Saint Apollinaris. In 1164 Emperor Frederick Barbarossa (Red Beard) presented the head of the highly revered St. Apollinaris to Archbishop Reinold Von Dassel, of Cologne. How it happened that this saint and his head became separated I do not know, but I presume it was for the purpose of allowing different places to have the honor of his sepulture. Archbishop Reinold Von Dassel was the gentleman who brought the bones of the magi (the three wise men) from Milan to Cologne, and it was on that trip he also received the head of Saint Apollinaris. He was carrying these precious relics in a vessel down the Rhine, and when he reached a point in the river opposite Remagen the vessel stopped in mid-stream and could not be persuaded to proceed another step, though the water of the Rhine is somewhat of a rushing torrent at this place. The archbishop was informed somehow (miraculously) that the head of the saint must be deposited in a shrine on the top of a near-by mountain; so he built a handsome chapel on the top of the little mountain at Remagen, which has since been known as Apollinaris mountain, and deposited the head under the altar. Then his vessel moved off entirely satisfied. A fine mineral spring then gushed from the mountain and its waters are the Apollinaris waters of commerce.

About one mile from Remagen the river Ahr joins the Rhine from the west, and from its valley come some of the finest Rhine wines, and also the Apollinaris spring is in the same valley, about five miles from its juncture with the Rhine. On the morning of June 19, we wheeled from Remagen to the banks of the Ahr and then westward to the saintly spring. We met now with our first opposition, and that was wind. No Kansas zephyr quite so strong have I ever encountered, but we reached the spring all right and drank from the fountain-head.

This spring is the property of the Kreuzberg family, but is leased by an English company which has made its name famous all over the world. About 50,000 bottles are filled every day, and 750,000 are dispatched every month to America alone. The water is conveyed to London directly by ships belonging to the company. After a good rest we started down the Ahr valley for Remagen again, but stopped at the Heppinger spring, which is only a half mile from Apollinaris spring, where we again drank, though we were not really thirsty.

The Ahr valley is very beautiful indeed, and on our return we could enjoy its loveliness, for the wind was now in our favor. The valley is narrow and on

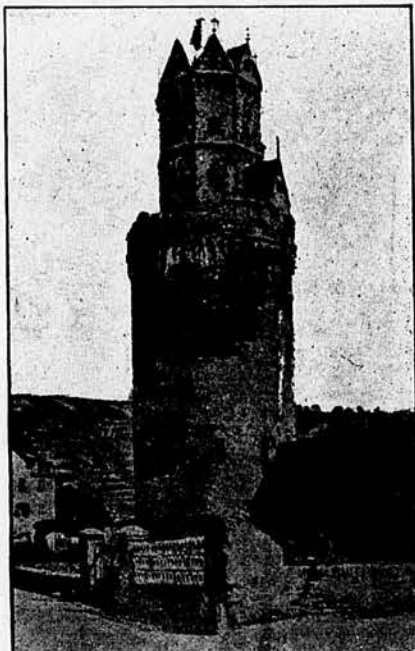
either side of the river are high hills, or mountains, in fact, which are terraced to their very tops, and on these terraces grow the grapes which furnish the finest of Rhine wine. We passed several beautiful red poppy fields in full bloom, and about half way between Apollinaris spring and Remagen we came to a curious but interesting shrine. The walls were decorated in shell work. In front there was no door, but a high iron picket railing enclosed it, so that worshippers must kneel outside and pray. It seems like a queer custom, where towns and villages are so close together where churches can be entered for worship, that so many shrines should be needed, but we noticed several in the Ahr valley, where either The Crucified was represented or the Virgin and Child; and at nearly every one we saw devout ones kneeling and praying.

It required but a half hour to ride to the Chaussee on the bank of the Rhine, and we again proceeded southward toward Coblenz. The vine-clad mountains on both sides of the river made a very pleasant picture, and our ride was most delightful.

ANDERNACH.

At noon we reached Andernach, which is less than fifteen miles from Remagen, but we had wheeled fully twenty-five miles, as we often turned aside to inspect a ruin or a beautiful chateau.

Andernach is also a very old town, and is partly surrounded by old walls,



ANDERNACH (THE WATCH TOWER).

with several watch towers. It is an interesting place to visit, and before we left we wheeled all around it.

We will also remember Andernach on account of the excellent dinner our German landlord had spread for us under a big shade tree in front of his hotel. We had "schnittzel" (veal cutlets) done to a turn, which we ate while we looked up at the big watch tower—a picture of which I send herewith.

After an hour's rest, which we employed in writing cards to friends in America and making memoranda of our trip, we started for Coblenz, ten miles distant, at the junction of the Moselle with the Rhine. To describe the scenery between Andernach and Coblenz would be but to repeat what we had seen before reaching Andernach, except that the beauty of the Rhine increases as one proceeds southward from Cologne. Coblenz is only forty-eight miles from Cologne, but we consumed three whole days in traveling it. From Remagen to Bingen the Rhine valley and the Rhine mountains are covered with grape vines and castle ruins. While the poetry of the old ruins is a great consideration, the reality of Rhine wine is a cheerful fact, so that the vines seem to begrudge the waste of ground covered by towers built a thousand years ago. Our beautiful, smooth road continued along the river close to its banks, and little villages were plentiful all along the route.

Just before reaching Coblenz the river forms a beautiful bend toward our left, leaving the mountains to the westward, and now a fine view was presented of the most beautiful city of Germany, with the picturesque fortress of Ehrenbreitstein crowning a precipitous rock 400 feet high. We crossed the Moselle bridge, built 550 years ago, and are now in the capital of the Rhenish province of Prussia.

COBLENZ.

Why was the city named Coblenz? I was very much amused in learning the reason. It was originally built by the Romans, who considered its location in choosing its name. As its position was

at the confluence of the two rivers, they called it, in Latin, Confluensia.

The native Teutons found difficulty in speaking the name. One said to another: "What do those people call this new city?" The answer was: "I don't understand him quite; it was Koofelence, or Kofulence, something like dot; meppy it was Koobelenze; ya, dot is eet, Koobelnz," and it has been Coblenz to this day.

But Kansans cannot laugh at the Dutchmen. Our State capital was named in a similar manner. A Kaw chief, visiting the shack on the banks of the Kansas river, which contained the fathers of Topeka, asked as follows: "Kindly inform me concerning the nomenclature of the article you have just now so dextrously abstracted from the coals?" "That," said Father Giles, "is a potato." "Topako, ugh!" and the Kaw chief returned home and told his folks that the white men down there ate topekos, and that settled the name of the place forever.

No other city in Germany can compare with Coblenz in beauty of situation. Located at the junction of the two most beautiful rivers of Europe, it has for centuries been visited by hosts of tourists from all parts of the world.

A long promenade extends along the right bank of the Moselle river, and then continues along the Rhine bank from the junction. At the very corner of land at the confluence of the two rivers, and where the Rhine and Moselle promenades meet, is located the large monument erected in memory of the old Emperor, William I. He is represented on horseback, facing the junction and the fortress of Ehrenbreitstein.

After a very much enjoyed supper, we mounted our wheels and rode over the beautiful promenade along the banks of both rivers and then sat at the foot of the Emperor William monument until it was time to retire to our hotel. We had enjoyed a long-to-be-remembered day, and now we slept as only tired and satisfied ones can sleep.

EHRENBREITSTEIN.

The meaning of the word is the "broad stone of honor," and the fortress on the top of this broad stone is the strongest in Europe north of Gibraltar. It is large enough to accommodate 100,000 men, and its magazines, cellars and cisterns will hold a sufficient supply for 8,000 men ten years.

A view of it from the river level would impress one with the thought that no army or navy could ever capture it, and history relates that in 2,000 years it has been captured but three times—once through treachery and twice by starvation of its garrison.

It was a fortress when Caesar invaded Gaul, about 2,000 years ago, and for how long a time before that I do not now remember. On the morning of June 20, we placed it first on our program for inspection. Mounting our wheels, we rode over the Rhine on the bridge of boats which connects Coblenz and the little

town of Ehrenbreitstein, at the base of the huge rock. The rocky road up the cliff is too steep for wheel riding, so we had to walk. The path is cut in the rock and winds around it, always protected on the outside by a wall pierced with rifle holes. Half way up, we encountered a pair of big iron gates, which were slowly opened by the guards, when they had time to conclude that they were safe from capture by the terrible Americans. Another circle of the rock brought us to the second pair of gates, which cautiously admitted us, and here we received tickets of admission to the parade ground at the top, and a sergeant was detailed to escort us. There were 6,000 soldiers on the rock and they really didn't seem to be one bit afraid of us. At last we were on the very top of the rock, and the view presented to us was worth ten times the difficulties we had experienced in climbing up.

The beautiful Moselle river could be traced with the eye a long way to the westward and the view up and down the Rhine was the most charming one I ever enjoyed. The waters of the Moselle are almost black in comparison with the Rhine, and after they join, the colors could be traced for miles down the Rhine, as though they did not mix but flowed as two distinct rivers within the banks of the Rhine.

We could have enjoyed the view for many hours, but we remembered that there were still other places we must see. We unwound ourselves down the huge rock and wheeled back to Coblenz, where we inspected the palace, both inside and out. We then again enjoyed the full length of the Rhine and Moselle promenades, and at 10 o'clock went aboard the steamer Wilhelm I. to continue our journey up the Rhine.

Grand Encampment, Knights of Pythias and Supreme Lodge Session, Indianapolis, Ind., August 22-29 and August 30 to September 10, 1898.

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THE WAR ENDING.

Terms upon which the United States ceased fighting against Spain were finally settled according to the dictation of this country. Cuba becomes free from Spanish rule. This was the demand upon the refusal of which war was declared. But while "Uncle Sam" was in the liberating business he concluded to extend his beneficence to all of the Spanish West Indies, and therefore took from Spain and made a part of the United States the beautiful island of Porto Rico, the Isle of Pines and a large number of smaller islands. As an incident of the war, Admiral Dewey found it necessary to take possession of a strong position in the Philippine islands, away around on the other side of the world. "Uncle Sam's" terms require that the important city and great bay of Manila be occupied by our forces pending the final disposition of the Philippines under a treaty of peace to be arranged by a joint commission.

The presumption grows stronger every day that this country will insist upon the cession of the entire island of Luzon, with its 3,000,000 inhabitants, to the United States. Whether we shall eventually acquire the entire Philippine group is still an unsettled question.

Spain's army is to be immediately withdrawn from the West Indies. The Spanish Captain General of Cuba has resigned on the ground that he cannot endure the depressing task of withdrawing the army from Cuba. It has been suggested that he thinks to place himself in better position to join what is suspected to be the proposed military uprising in Spain against the present dynasty.

While the peace negotiations were pending, Dewey and Merritt took Manila and Captain General Augusti escaped on a German vessel to Hong Kong and will, it is believed, hasten to Spain.

The country which discovered America and colonized and owned a large part of the New World has finally lost all of her possessions in this hemisphere. Strangely enough, Cuba, the first land discovered by Columbus, is the last to slip from Spain's grasp. The power of Spain is now so broken that she will scarcely be able to maintain any authority in the far east, even should this country not wrest all of her eastern possessions from her. Spain has asserted that she was a first rate power among the nations of the world. She must now accept a place among the second rate powers, and with the development now going on whereby the United States, Great Britain, Russia and Germany are outstripping others heretofore regarded as first rates, and creating a new scale of first rates, France and Austria, with some others which have scarcely maintained an equality with them, seem likely to constitute the second rates, while Spain, with several other small governments, will properly constitute third rate of powers.

A feature of the coming "Old-fashioned Fair" at St. Joseph, Mo., will be the doll carnival, the entire proceeds of which will go to the relief of the boys in blue now in camp. The ladies in charge suggest that the ladies of a community dress a doll and send it to the show. The dolls will be sold on the last day of the fair. Parties sending dolls should address them to Dr. M. W.

Steiner, Dental Parlors, Sixth and Francis streets, St. Joseph, Mo., accompanied by card attached, giving name and address of the donor.

FARM DEPARTMENT, KANSAS STATE AGRICULTURAL COLLEGE.

The editor of the **Kansas Farmer** visited, last week, the State Agricultural College, at Manhattan, with a view to becoming more intimately acquainted with details of the purposes and working of the farm department.

The first duty of an agricultural college is to make men of its students, the next to make them good farmers. At least twelve instructors in the college help the student to round out his education and give him general culture. For this reason instruction in the farm department is confined to the science of agriculture and the handling of the knowledge of this science, and of the other sciences taught in the college, and to making money by farming. As examples, the laws of physics governing capillary action are considered in their relations to managing the soil so as to produce a crop in time of drought. After the chemistry of foods and feeding is studied, the student uses his knowledge in combining Kansas feeds to produce beef, milk and pork at the least cost, of the desired quality and with the maintenance of the health of the animals fed. The science of breeding is taught, that the student may be able to select and breed animals that will consume the most feed, give the greatest increase for feed consumed and bring the top market prices for quality. In dairy work the instruction is in the lines of lowering the cost of production, of increasing the quantity produced, and of handling the products to secure the quality of goods that will bring the highest prices. Instruction is given in managing Kansas soils to maintain and increase their fertility while drawing a profit from the work. The best methods of raising Kansas crops are thoroughly considered. In every class the students keep a close watch of the methods of field and feeding work of the college farm and compare these with the methods given in their text-books and lectures. The teachers acquaint themselves with the peculiar conditions of each student's home farm, as far as possible, and make the application of the knowledge a personal one.

In the spring of 1898 co-operative experimental work was started with the students, and this promises to be the best method of testing the value, for the different parts of the State, of new or improved seeds and of new methods of field and feeding work that have been found successful for the locality of the college. It is difficult to get a satisfactory test by an uneducated farmer, of a new variety of seed or method; but students who have had training in the methods of conducting such trials can be relied upon to make observations and keep records that will make these tests useful. The college expects to continually enlarge this co-operative work with its graduates and students.

In experimental lines the field work is confined to the conservation of moisture, seed breeding and methods of soil improvement with plants adapted to Kansas conditions. In this work the botanical and chemical forces work with the farm. Experiments have shown that twelve inches of rain passing through the plants will produce a maximum crop. More than this amount falls every year at every point in Kansas, but the greater portion is lost through evaporation and in the streams. Practical methods of saving this rainfall are being developed.

Kansas farmers believe in blooded stock, but most of them use "scrub" seed for raising their crops, and the losses to the State from poor quality, infertile and inbred "scrub" seed are greater than if "scrub" sires only were used to produce all the horses, cattle, swine and sheep grown in the State. The work of the college in seed breeding is to increase the yield and the drought-resisting powers of the plants and to increase their protein contents, so that each pound raised will be worth more for feeding. Greater profits to the State for the amount of money expended will probably come from seed breeding than from any other line of work undertaken by the college.

In developing methods of improving the soil, crops such as alfalfa and soy beans are used, which make profitable returns for the part harvested; while the roots add to the fertility of the soil, and experiments are being conducted that show the high feeding value of these soil-renewing crops.

Plans for feeding experiments are made and some of the work is begun. All will be pushed as fast as funds are available. It is thought that all feeding operations should be conducted on a

large scale and the college become one of the large feeders of the State, the feeding to be conducted on a business basis with the money from the experiment station to be used for collecting and publishing data developed by the experiments. The object of the feeding experiments is to determine best methods of feeding Kansas crops, and particularly those crops which are drought-resisting.

Thirty thousand Kansas farmers furnish milk to creameries. Most of this milk comes from cows bred for beef. These 30,000 men want to know what cross will pay best, considering both milk and calves. As soon as funds are available for the purchase of stock, the college wants to test this question by taking 250 common Kansas cows, fifty head to be bred to a typical bull of each of the following breeds: Jersey, Guernsey, Ayrshire, Holstein and Short-horn, the groups of cows being rotated in breeding each year until every cow has been bred to every bull in the test; the male calves to be fed for beef until ready for slaughter as finished steers, a record to be kept of the cost of feed and of the gain; and an examination to be made of the carcasses after slaughter; the heifers to be fed for dairy purposes and to be tested for milk and butter production after reaching proper age. During the progress of this experiment, the influence of Kansas feeds on quantity and quality of milk and butter can be determined and best methods developed of handling and making dairy products under Kansas conditions.

If funds permit, steer-feeding experiments will be started in September, the first work being to determine the best combinations of Kafir corn grain with other Kansas feeds for fattening and to ascertain to what extent alfalfa can be profitably used in fattening steers. Carload lots will be used for each combination of feeds. Similar work is planned with swine. The work of feeding is chiefly done by students and the management of stock in large numbers is one of the best methods of giving students a business training.

Feeding is now in progress with a herd of western Kansas cows to secure the best yields of milk and the handling of this milk in the cheapest manner that will get it in good condition to a creamery.

Correspondence is an important part of the college work. The Farm Department welcomes questions on any subject concerning farm production from any Kansan. The college farmers are frequently unable to answer every question asked, but many inquiries are answered daily, and the information furnished through the field and feeding experiments is often exactly what is needed to help the questioner in increasing the profits from his farm.

SHORT-HORN BREEDERS ORGANIZE.

The Missouri and Kansas Short-horn Breeders' Association held its semi-annual meeting at the Centropolis hotel, Kansas City, Wednesday evening, August 10. Much interest was shown by those present. Among the principal breeders and breeding firms represented were ex-Gov. G. W. Glick, Atchison, Kas.; Powell Bros., Lee's Summit, Mo.; T. K. Tomson & Sons, Dover, Kas.; N. H. Gentry and Gentry Bros., Sedalia, Mo.; Mr. Harsaw, Kearny, Mo.; Colvin Dean, Newkirk, Okla.

The officers elected are as follows: President, N. H. Gentry; First Vice President, G. W. Glick; Second Vice President, B. O. Cowan; Secretary, W. P. Brush; Treasurer, John R. Tomson.

Plans were arranged for a big meeting, to be held on the third Wednesday of February, 1899. A number of papers are being prepared and will be read at this meeting by the leading breeders.

All who are interested in the breeding of Short-horns are requested to send their names and addresses to Secretary W. P. Brush, Station A, Kansas City, Mo., and all are urged to manifest their interest not only in this way but to attend the meeting in February, and, as Mr. Gentry expresses it, "have a rip-roarin' old time."

If the Short-horn men have been somewhat reticent in the past they are surely awakening to meet the present good times. While the range men are liberal buyers of Short-horn bulls to keep up size and quality on the ranges, the feeders of Illinois, Iowa and the central States are seeking the Short-horn steer with equal energy. The Short-horn breeders have a bright prospect before them and should not overlook the advantage of organization.

To this organization and to all similar societies in the various breeding camps the **Farmer** extends the "glad hand."

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POPULATION OF KANSAS BY COUNTIES.

The population of Kansas, as returned by township assessors through their County Clerks, for March, 1898, has been tabulated by the State Board of Agriculture, and the total is 1,389,777, or a net increase of 22,988 during the year.

Fifty-four counties have gained 35,872; the smallest gain is 10 in Hamilton, and the largest 6,078 in Wyandotte. Fifty-one counties lost 12,884, the smallest loss being 1 in Trego, and the greatest 1,694 in Cherokee. The following table shows the population and also the increase or decrease in each county:

County.	Population.	In-crease.	De-crease.
Allen	15,905	1,464	
Anderson	14,143	43	
Atchison	28,887	3,870	
Barber	5,159		581
Barton	12,937	501	
Bourbon	25,926	513	
Brown	21,424		126
Butler	21,429		458
Chase	7,151	368	
Chautauqua	11,167	1,174	
Cherokee	36,347		1,694
Cheyenne	2,639		192
Clark	1,656	216	
Clay	16,104	401	
Cloud	17,105	739	
Coffey	15,626		401
Comanche	1,369	92	
Cowley	30,040	3,031	
Crawford	39,605		1,044
Decatur	7,317	214	
Dickinson	21,282	474	
Doniphan	15,664	179	
Douglas	25,249		2
Edwards	3,134	110	
Elk	10,770	115	
Ellis	7,708	144	
Ellisworth	8,894		2
Finney	3,160		193
Ford	4,501		695
Franklin	23,758	1,343	
Geary	10,093	63	
Gove	2,093		52
Graham	4,478	244	
Grant	419		17
Gray	1,073		32
Greeley	502		177
Greenwood	15,246	89	
Hamilton	1,453	10	
Harper	8,797		439
Harvey	17,977	1,525	
Haskell	453		9
Hodgeman	1,727	83	
Jackson	18,836	1,347	
Jefferson	17,370		776
Jewell	18,344	1,100	
Johnson	17,507		46
Kearny	1,030		312
Kingman	10,104		132
Kiowa	1,878		790
Labette	28,869		2
Lane	1,662		59
Leavenworth	35,509		78
Lincoln	9,205		689
Linn	16,542		34
Logan	1,734		701
Lyon	24,885		315
Marion	20,105		292
Marshall	24,753		25
McPherson	20,785		4
Meade	1,562		874
Miami	20,397		439
Mitchell	13,394		231
Montgomery	25,440		408
Morris	11,377		60
Morton	255		231
Nemaha	20,419		314
Neosho	19,622		178
Ness	4,039		428
Norton	10,045		1,122
Osage	25,061		91
Osborne	11,015		29
Ottawa	10,600		359
Pawnee	4,565		418
Phillips	12,649		57
Pottawatomie	17,853		423
Pratt	5,595		47
Rawlins	4,766		103
Reno	26,313		1,102
Republic	17,161		519
Rice	13,205		274
Riley	12,453		150
Rooks	7,440		32
Rush	5,289		78
Russell	7,366		167
Saline	16,020		95
Scott	1,013		54
Sedgwick	38,705		22
Seward	685		596
Shawnee	50,582		153
Sheridan	2,971		38
Sherman	3,234		957
Smith	14,898		132
Stafford	8,231		59
Stanton	326		23
Stevens	519		737
Sumner	23,421		245
Thomas	3,616		1
Trego	2,249		20
Wabaunsee	12,172		279
Wallace	1,137		821
Washington	21,475		191
Wichita	1,186		10
Wilson	15,034		167
Woodson	9,380		
Wyandotte	65,557	6,078	
Totals	1,389,777	35,872	12,884

The United States Civil Service Commission announces that an examination will be held for the postal service in this city on some date between October 1 and 15, 1898. All persons who desire to be examined should apply to the Secretary of the board of examiners, at the postoffice, for application blanks and full information relative to the scope of the examination. Applications on form 101 must be filed in complete form with the Secretary of the board prior to the hour of closing business on September 1; otherwise the applicants cannot be examined. Soon after filing applications applicants will be notified as to the exact date of examinations.

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.

SHALL THEY GO TO COLLEGE?

Comment has heretofore been made in these columns on the fact that the Kansas State Agricultural College ought to have dozens and scores of students where it now has individuals. That its attendance has not uniformly increased, but that, in fact, as its catalogue shows, it has actually fallen off five times in the last eighteen years, is in part due to the fact that the people, including even the farmers who should be most keenly alive to its presence, have been largely unfamiliar with its exceptional advantages. There is a report of a farmer brought up in Riley county inquiring whether it were true that an agricultural college existed at Manhattan. We are pleased to observe that the college authorities are themselves coming to realize this condition of things and are making an effort to acquaint the people with the opportunities found at that excellent institution for our Kansas boys and girls. Among other things, they have published and are scattering the following series of questions and answers concerning the college:

QUESTIONS AND ANSWERS CONCERNING THE KANSAS STATE AGRICULTURAL COLLEGE.

1. What is the Kansas State Agricultural College? It is the leading school in the country for instruction in agriculture, mechanics, the arts of home-making and home-keeping, and the science of government.
2. How old is it? Nearly forty years.
3. Where is it located? At Manhattan, in Riley county, at the junction of the Kansas and Blue rivers, and on the Union Pacific, Rock Island, Santa Fe and Manhattan & Blue Valley railroads.
4. How may it be reached? On any of the roads named. Manhattan is one of the most accessible points in Kansas.
5. How many buildings has it? Nine large stone buildings. They are main, library, domestic science, chemistry, mechanics, horticulture, greenhouses, armory, barn, two dwellings and other buildings.
6. What is their value? It is estimated at \$354,735.
7. How much land does the college own? It owns 332 acres.
8. What are its surroundings? It is located on a hill commanding the city of Manhattan and the Kansas and Blue rivers, and is surrounded by a campus of sixty-five acres. The grounds are among the finest in the country.
9. How large is the faculty? The faculty consists of twenty-five persons. In addition there are some twenty assistants and foremen, and about twenty-four student assistants.
10. How many students attend the college? Over 800 were enrolled last year.
11. How many have graduated? Six hundred and forty-two.
12. What do the graduates of the Agricultural College do? They are found in many useful pursuits, notably in agriculture, stock raising and teaching. See catalogue, pages 93 and 94.
13. Where does the Agricultural College get its money? Principally from the federal government, which gave it its original endowment, now yielding some \$27,000 annually, and which furnishes it annually a lump sum, called the Morrill fund, amounting this year to \$24,000. The federal government also contributes annually \$15,000 for the support of the experiment station. The college sells annually from \$7,000 to \$10,000 worth of produce. The State of Kansas makes appropriations for buildings and repairs, and makes sure that the endowment fund suffers no loss. It has appropriated during the last twelve years about \$18,000 annually, amounting to about one-twentieth of one mill on the assessed valuation of the property of the State, or 5 cents on each Kansan paying taxes on \$1,000, and owing, therefore, \$3,000.
14. What kind of an education does the college undertake to give? A liberal education, giving the student the mastery of his powers and faculties; a practical, fitting him to earn an honest living; and a training for intelligent citizenship.
15. How many courses does it offer? An agricultural, an engineering, a household economics, an architectural, a general, a dairy course, and courses for apprentices in the shops and the printing office.
16. How long are the courses? The agricultural, engineering, household economics, architectural and general are each four years long. The dairy course is twelve weeks long, running through the winter term of a single year. The apprentice courses are from forty to eighty weeks long, or longer.
17. What is the object of each course? The development of manhood and womanhood is the first object of each; the acquirement of ability to do some needful work is the next. The agricultural course fits men to manage farms of their own and to superintend the farms of others, taking up the lines of stock- and crop-raising, orcharding and gardening. The engineering course prepares for the mechanical industries and engineering; the household economics course teaches the student to cook and sew and to manage the home; the architectural course prepares for planning and constructing buildings. The general course is designed for those not yet prepared to select their calling. The dairy trains creamery patrons and private dairymen to avail themselves of the ideal dairy conditions afforded by Kansas. The apprentice courses prepare for actual work in shops and printing offices.
18. Why does the college teach economics? Because nowadays one may work hard and skillfully and produce abundantly and yet remain poor in a rich country. Economic science teaches why this is true and how to improve upon such conditions.
19. Has the college a military department? It has. Unquestionably the best place in Kansas at which to acquire a military education is the Kansas State Agricultural College. In the present war, Agricultural College students, when given a chance, stepped at once to the front; proving their ability, not as soldiers simply but as officers.
20. To what extent do the students work with their hands? One hour each day is

required of the student in the four-year courses throughout almost his entire stay in college; in the short courses much more hand work is required.

21. Why does the college teach students to do manual work? Because most people must do such work, and what most must do all should understand and respect; because hand work is as dignified as head work if equally well done, and as necessary; because education involves the development of one's powers, whether physical or mental, and the placing of them under his control.

22. What good will an education do a young man on a farm? Such a man is the very one who cannot afford to miss an education. The education we offer will make him a more industrious, more skillful, more economical, more intelligent, more prosperous and more patriotic farmer.

23. Does a country boy need to go to college to learn farming? Quite likely, if he is ever to learn it. Farming nowadays includes more than turning a furrow; it involves a knowledge of chemistry, physics and botany, and of what investigators and experimenters have learned of tillage and fertility, crop production and rotation, feeding, breeds and breeding, milk production, drought-resisting crops and other things of which the old-fashioned farmer may never have heard.

24. Is not farming farming the world over? Not exactly. Men in some countries still scratch the ground with a crooked stick and cut their grain with a hand sickle. Kansas is beyond that point now, but she needs to go as much farther before her farmers will have reached the level already attained in manufacturing, railroading and other lines. The great extension of transportation systems has brought farmers and consumers so close together that each farmer is in severe competition with every other farmer in the whole world. The farmer who succeeds in this competitive system must offer products better in quality and lower in price than those of his neighbor. To solve the question of lower cost and better quality of product the farmer must have all the help science can offer and the benefits of the experiences of successful farmers. The farm course gives this.

25. Does a young woman need an education unless she intends to teach school? If an education were simply something to be sold to some one else that the buyer might

furnish each student upon arrival a list of rooms and boarding places and a map of the town. The college Y. M. C. A. maintains a committee to aid students in getting settled.

27. What must I pay the college for tuition and fees? Not one cent. The Agricultural College is a "free school."

28. Does the college charge for instruction in music or oratory? It does not. All its advantages are furnished to all its students without charge.

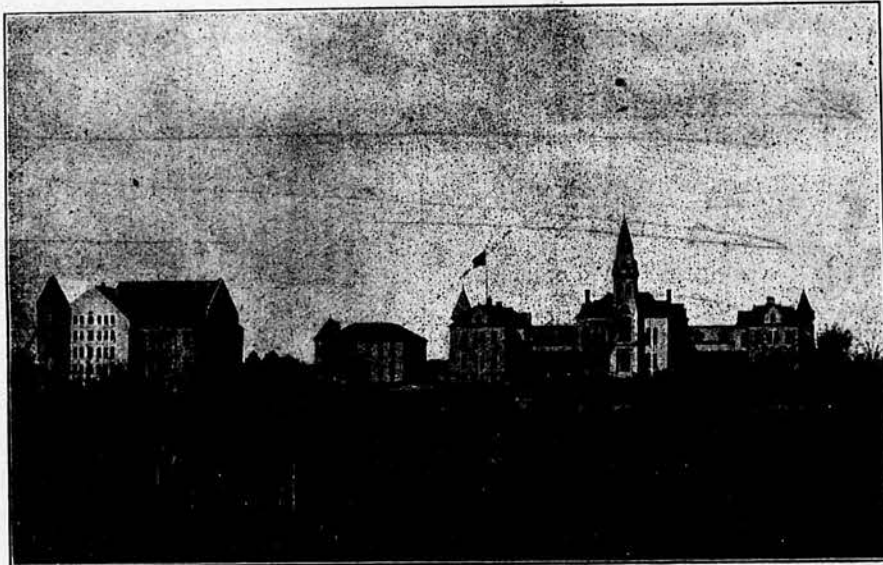
29. What will my books cost me? See catalogue, pages 80 to 82. The college has this year established a book store at which it will furnish books and supplies at cost.

30. How expensive is board at Manhattan? See catalogue, page 80. The expense is moderate, but the college desires to see it reduced and its quality improved. To that end it has established a dining hall at which wholesome and palatable mid-day meals are furnished students, professors and employees at cost, the charge being 10 cents per meal or less.

31. How much must I pay for room rent? See catalogue, page 80. With instruction given gratis, and with mid-day meals, books and supplies furnished at cost, the college is not yet satisfied, but would be glad to furnish clean and healthful rooms at cost also. If you favor this, ask your State Senator and Representative to make it possible.

32. Can I earn any part of my way? See catalogue, page 79. The earnest student without money can carry his studies farther in the Agricultural College on the proceeds of his own labor than in almost any other institution in the country. By the measures mentioned in the last five answers the college endeavors to lighten as much as possible the burden of student poverty. It goes farther, and furnishes much work to students at 10 cents per hour. It would be glad to furnish much more of this and at a higher rate; this it might do with legislative help. Some States appropriate a specific sum to be paid for student labor; Kansas could do this and never feel it, and at the same time enable scores of poor boys and girls to attend college where one does so now. This is another good thing to mention to your State Senator and Representative.

If all your questions are not answered in the above, write a letter to the undersigned; and do not forget that the Kansas State Agricultural College is a free school and exists for the benefit of the young



SOME OF THE KANSAS STATE AGRICULTURAL COLLEGE BUILDINGS.

sell it again, education should be abolished and educational institutions put to some useful work. Education means the opening of blind eyes, the unstopping of deaf ears, the substitution of power for weakness, of skill for clumsiness and of efficiency for inefficiency. It means a turning about of one who is traveling a wrong road and enabling him to move more rapidly in the right direction than he has been moving in the wrong.

26. Why does the college teach cooking? Because "civilized man cannot live without cooks," and cooking must be learned somewhere.

27. Can it not be learned at home? About as well as other trades and professions and skilled occupations may; no better. Good cooks are scarce and not all of these have the ability, disposition or students to teach.

28. What activities do students engage in on their own account? They maintain four flourishing literary societies, two successful Christian associations, a live Farmers' club, a progressive "Utopian" club, and one of the best student papers to be found, the Herald.

29. When does the college open? Fall term, September 7, 1898; winter term, January 3, 1899; spring term, March 29, 1899.

30. How old must I be to gain admittance? The student must be 14 years of age to enter college classes and 18 to enter the preparatory department.

31. What must be my other qualifications? The student must (1) pass an examination in the common branches, or present (2) a diploma showing completion of an approved county course of study, (3) a certificate showing completion of a grammar school course, or (4) a Kansas teachers' certificate. (Catalogue, pp. 75-6.)

32. Will work that I have done in another reputable institution be credited to me at the Agricultural College? Yes, usually, if it corresponds fairly well with the work required in the course you desire to take in this institution.

33. What course should I take? Try to discover your bent and follow it, taking the course that will fit you for the work nature intends you to do. (See answer 16.) Round pegs should keep out of three-cornered holes.

34. May I change from one course to another? Yes, but usually at a loss to yourself, hence choose carefully. Be sure you're right; then go ahead.

35. Can I learn a trade at the Agricultural College? In the apprentice courses, yes. The Agricultural College, however, is not a trade school; yet one of its courses, pursued even for a short time, is of great benefit to one entering a trade.

36. How shall I find a room? The college

people of the State of Kansas and of other States and Territories who will avail themselves of its advantages. Come to the Agricultural College. THOS. E. WILL, President K. S. A. C.

Among those who are aware that Kansas maintains an Agricultural College there are some who are profoundly impressed with the burden imposed by this institution upon the taxpayers. How many of these have known that the State of Kansas furnishes but about one-fifth of the revenue consumed by this institution?

If where cents are now expended for this institution dollars were given, the investment would be one of the most profitable that could be made for the farmers, and indirectly for other interests of the State. The efforts of the institution to employ in a practical way the funds now at its disposal, and its disposition to enlarge its attendance despite the fact that such enlargement increases the labor of its officers and the pressure upon its funds, are to be commended. Worthy of especial notice are the attempts made by the college to render its advantages available to students possessing scant means—a class always large but none the less worthy. Unlike all private and—in many States—State institutions, the Agricultural College charges no tuition or fees. Some colleges charge as high as \$150 per year for tuition alone, not to mention laboratory fees. The college also furnishes wholesome mid-day meals at cost and has recently established a book store at which it will hereafter furnish books and supplies at cost.

When, in addition to the above, the opportunities for labor and earnings are considered, opportunities inadequate, it is true, but large in comparison with those afforded by other institutions, the college becomes evidently one of the least expensive as it is certainly one of

the most worthy educational institutions in the West.

Were we to make a suggestion it would be that the work already begun by the college in the direction of making its privileges available to those without means be carried still farther, until all the chief necessities of life shall be furnished students at cost. This would include full boarding and lodging, as well as books and supplies. With the dining hall now in successful operation three meals could doubtless be furnished more cheaply, per meal, than one. Lodging at cost would require a college dormitory. Such an institution is very common at colleges and might well be provided by the Legislature. If, in addition to this, a special appropriation were made, as in some States, for the employment of student labor by the college, a road might be opened for many more worthy young men and women to pay their way through college by their labor. The demand for an extension of such opportunities we know to be great.

WHEAT EXPERIMENTS.

A bulletin just issued from the Kansas Experiment Station, Manhattan, Kas., says:

"Wheat went through the winter in good condition and started well in the spring, when March 22 a freeze cut it to the ground. This delayed ripening two weeks, making it so late that it was caught by the black rust after the usual time of ripening. The black rust appeared June 17, as most of our wheat was in the dough, and in three days wheat that had promised a yield of thirty to forty bushels per acre was hardly worth cutting, the plants were dead, the straw fallen over and the grains shrunken to less than half size.

"We grew fifty-four varieties, but most of them were so badly injured by the rust that they were not cut. The highest yield of the Turkey, our standard hard wheat, was eighteen bushels per acre, while the highest yield of the Zimmerman, our standard soft wheat, was twenty-eight bushels per acre.

"A test was made to determine whether it is best to plow the ground in a drought and harrow it into shape ready for seeding at the usual time or wait until a rain comes and then plow. The early plowing was made July 30, the ground turning up hard and lumpy. It was worked with harrows and float until in fair tilth. October 16-17 a rain fell, wetting the ground four to six inches, and the late plowing was made, the land fitted and both early and late-plowed plats seeded. From the time the wheat started until it was struck by the rust that on the early plowed ground appeared more thrifty and promised a better yield. The rust ruined all plats. The early-plowed land yielded 6.4 bushels per acre, the late plowed 6.5 bushels.

"A trial was made of ordinary and thorough preparation of ground for wheat. That given ordinary treatment was harrowed and floated until in fair condition, but having many small clods on the surface, a condition liked by many Kansas wheat-growers. That given thorough treatment was gone over with disc harrow and float until a fine dust mulch four inches deep was made. The ordinary treatment yielded 19 bushels per acre, weighing 53.7 pounds per struck bushel. The thorough treatment gave 22.4 bushels per acre, weighing 54.7 pounds per struck bushel, a gain in yield of nearly 18 per cent. for thorough treatment.

"Two trials were made of ordinary treatment of ground for wheat, thorough treatment and of treating it with the Campbell sub-surface packer. In one test the yields were, ordinary treatment 15.5 bushels per acre, thorough treatment 17.7 bushels, and treated with the sub-surface packer 18.4 bushels. In the other trial the yields per acre were, ordinary treatment 8.6 bushels per acre, thorough treatment 9.8 bushels, sub-surface packer run over the ground once 10.4 bushels, and packer used three times 10.7 bushels.

"The station has had an acre in wheat continuously for the past eighteen years without manure to test the fertility of the land. This year just before the appearance of the rust this acre promised a yield of 30 bushels. The wheat was nearly destroyed by the rust and the yield was 9.77 bushels. The product of eighteen years has been 342.5 bushels, an average of 19 bushels per year.

"The chief work of the station this season in wheat has been in crossing varieties to secure higher yields and more gluten. Three thousand crosses were made this summer and will be planted this fall."

\$16.05 to Indianapolis and return via Santa Fe Route. Tickets on sale August 19, 20 and 21.

Horticulture.

FOREIGN TRADE IN FRUITS.

From Year-Book of the United States Department of Agriculture.

The beginning of the foreign fruit trade of the United States is with difficulty distinguished at this time, but it seems to have started with the receipt of a shipment made in 1621 by the Governor of Bermuda to the Jamestown colony. It consisted of "two great Chests filled with all such kinds and sorts of Fruits and Plants as their Islands had; as Figs, Pomegranats, Oranges, Lemons, Sugar-canes, Plantanes, Potatoes, Papawes, Cassado roots, red Pepper, the Prickell Peare, and the like."—(Capt. John Smith's Works, p. 681.) This was followed within a few months by the arrival in Bermuda from Virginia of "a small Barke with many thanks for the presents sent them; much Aquauitae, Oile, Sacke, and Bricks they brought in exchange of more Fruits and Plants, Ducks, Turkeys, and Limestone; of which she had plenty and so returned."—(Ibid, p. 682.) As intercourse was frequent, there was undoubtedly a considerable import trade in such fresh fruits of the tropics as would endure sail transportation between the more southern coast colonies and the West Indies, though little is on record to bear witness to the fact.

At what time the trade in the fruit products of southern Europe began is not known, but it was doubtless at an early day. The inventory of the Hubbard store, York county, Virginia, in 1667, discloses the following items: "Twenty-five pounds of raisins, one hundred gallons of brandy, and twenty gallons of wine."

As most of the dried and preserved fruits of the Mediterranean region were then considered luxuries rather than necessities, it is likely that the trade in them did not become important until the colonies had accumulated considerable wealth. It probably became an important item before the Revolution, and was, no doubt, seriously interfered with during the second war with England. It is a tradition among the fruit dealers of New York city that when it was desired to celebrate the signing of the treaty of peace in 1814 by a grand banquet, only half a barrel of raisins and currants and a box or so of citron could be found in the city for the making of a plum pudding.—(Letter from Hon. Antonio Zucca, January, 1898.)

In 1821, when the Treasury department published its first statement of imports and exports, the imports of fruits and nuts, of which currants, raisins, figs, plums, prunes and almonds are separately stated, amounted to 2,878,873 pounds, valued at \$181,035.

At about this time notices of auction sales of the fruits mentioned, and of oranges, lemons, Malaga grapes in jars, tamarinds, citron, Madeira nuts, and filberts were of frequent occurrence in the market reports of New York city.

The export trade seems to have begun with the apple, as a large supply existed in close proximity to the seaport towns. Trade in this fruit with the West Indies probably developed early in the eighteenth century, though we have no record of shipments until 1741, when it is stated that apples were exported from New England to the West Indies in considerable abundance. No trans-Atlantic shipment has been disclosed earlier than that of a package of Newtown Pippin of the crop of 1758 sent to Benjamin Franklin while in London. The sight and taste of these brought to John Bartram, of Philadelphia, an order for grafts of the variety from Franklin's friend Collinson, who said of the fruit he ate: "What comes from you are delicious fruit—if our sun will ripen them to such perfection." Subsequently a considerable trade must have resulted, for in 1773 it was stated by the younger Collinson, that while the English apple crop had failed that year, American apples had been found an admirable substitute, some of the merchants having imported great quantities of them. In his words: "They are, notwithstanding, too expensive for common eating, being sold for two pence, three pence, and even four pence an apple. But their flavor is much superior to anything we can pretend to, and I even think superior to the apples of Italy."

Statistics on the subject are lacking until 1821, when the total export of fruit included in the treasury statement consisted of 68,443 bushels of apples, valued at \$39,966.

EXPORTS OF APPLES.

As has been noted, the apple was the first fruit exported. Aside from apples, fresh and dried, and vinegar (one of the chief apple products), no other fruit item

was scheduled among exports until 1865. Beginning in 1821 with 68,443 bushels, valued at \$39,966, the annual averages, by decades, show a steady increase in the quantity of apples exported, with a slight decrease in value during the last period. The maximum quantity thus far shipped was in the fiscal year 1897, when 1,503,981 barrels, valued at \$2,371,143, were exported, though the greatest value (\$2,407,956) was in 1892.

Records of shipments during the latter part of the eighteenth century are lacking, but the New England export trade in ice, which began with the West Indies in 1805, was accompanied by shipments of apples on a large scale. Soon after the ice trade was extended to India and China, which was in 1830, New England apples could be had in the ice ports of those countries, and such is the case at the present time. According to the statement of B. G. Boswell, of New York (Transactions American Institute, 1843, p. 125), in 1843, the fruit dealers of Boston had at that time been shipping apples and cranberries to Europe for many years. This writer commended the Baldwin and Newtown Pippin for the purpose, and emphasized the necessity for shipping none but "the very finest quality." The following tables show the average annual exports of apples and apple products by decades, 1830 to 1890, and exports by years, 1891 to 1897, inclusive:

Decade ending—	Barrels.	Value.
1830.....	20,422	\$ 34,495.20
1840.....	18,525	37,031.70
1850.....	30,504	61,627.30
1860.....	38,860	104,107.90
1870.....	99,316	*247,113.22
1880.....	196,810	584,701.60
1890.....	546,987	1,397,377.00
1891-1897.....	606,176	1,354,455.28

*Average annual quantity and value for nine years, 1881 to 1889, inclusive, and 1870.

Year.	Barrels.	Value.
1891.....	135,207	\$ 476,897.00
1892.....	938,743	2,407,956.00
1893.....	408,014	1,097,967.00
1894.....	78,580	242,617.00
1895.....	*818,711	1,954,818.00
1896.....	990,002	930,289.00
1897.....	1,503,981	2,371,143.00

In 1845 it is stated (Genesee Farmer, November, 1845, p. 175) that the Newtown Pippins from the orchard of Robert L. Pell, of Ulster county, New York, sold in London at \$21 a barrel. The merchant to whom they were consigned wrote that the nobility and other people of great wealth bought them at retail at a guinea a dozen, or about 42 cents an apple. The next year, when his crop was estimated at from 3,000 to 4,000 barrels, the fruit sold upon arrival in New York at \$6 per barrel for shipment to England.

Mr. Pell's orchard of 20,000 trees of Yellow and Green Newtown became famous on account of the high prices received for its fruit, and in consequence the varieties mentioned were planted and grafted throughout the apple regions of the country. They did not prove equally successful elsewhere, however, except in the Piedmont and Mountain regions of Virginia and North Carolina, where the principal supply of "Pippins" for export has for many years past been produced.

Patrick Barry, writing from London in 1849, in commenting on the American apples then for sale in that market, emphasized the importance of sending abroad none but carefully handled fruit of select varieties, and stated as his conclusion that "the Newtown Pippin and Roxbury Russet come nearer the English than any other varieties we cultivate." He predicted a profitable demand for American pears in England, saying: "If we ever succeed in raising pears beyond what may be required for home consumption, they will find market and good prices here. Not one person in a thousand, I might say five thousand, ever tastes a fine pear."—(New England Farmer, Vol. I., 1849, p. 103, copied from Genesee Farmer.) This prediction California growers and shippers are now endeavoring to verify.

The Newtown held its supremacy for many years, though other varieties were shipped in gradually increasing quantities, and in 1880 an unusually large crop of apples caused large shipments of many kinds to be made. The shipments of apples during the fiscal year 1881 amounted to 3,071,928 bushels, valued at \$2,301,334, and since that time the trans-Atlantic trade in apples has been an important item in the export trade of the country. Until 1896 Great Britain was the only important customer, but shipments to Germany in that year have been followed by a large and growing demand, which promises well for the future.

Though the Eastern States still furnish the larger part of the apples exported, large shipments are now made from the great orchard districts of the Mississippi valley, and some profitable shipments have been recently made from the Pacific coast.

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Pittsburgh.
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FAHNESTOCK
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EUKSTEIN
ATLANTIC
BRADLEY
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JEWETT
ULSTER
UNION
SOUTHERN
SHIPMAN
COLLIER
MLISOURY
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
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Cleveland.
SALEM
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MANY of the "mixtures" branded and sold as Pure White Lead contain little if any White Lead, but are zinc and barytes. Barytes is used because it is cheap, not because it has any value as paint.

Protect yourself by using brands which are genuine and made by the old Dutch process. See list of genuine brands.

National Lead Co., 100 William St., New York.

The Breeding of Fruit Trees.

Editor Kansas Farmer:—It is singular that in the propagation of fruit trees in the nursery the character of the tree from which the scions are taken does not receive more consideration. Every one who has had any experience with orchards knows that the trees possess as much individuality as do the various cows of a dairy herd, and that just as among cows of the same breed we find a marked difference in the amount and quality of the milk produced, so with trees of the same variety there is a very noticeable difference in the quality and quantity of the fruit produced. Go into any orchard where there are a number of trees of one variety, and notice the difference. It is probable that the fruit on all the different trees may be easily identified as Ben Davis, Missouri Pippin, or whatever the variety may be, and it is even possible that in general habit of growth the trees may resemble each other sufficiently to enable one familiar with the variety to recognize it. But here the similarity ceases. It will be found that one tree bears large and regular crops, while the very next tree, situated in identically the same soil and apparently under exactly the same conditions in all other respects, will bear only light crops, even in fruitful years, while in "off" years it bears nothing. This difference is not to be explained in any other way than that of the individuality of the tree; but we do not care so much for an explanation of the fact as we do to have it recognized and given the attention it demands.

If this marked difference exists between trees of the same variety, can we not depend upon these characters being transmitted to future generations? In large measure we can, for the habit of bearing abundantly is just as much a part of the plant's character as is its habit of growth or the flavor of its fruit. This being true, is it not of the utmost importance that in the propagation of fruit trees the nurseryman should select scions only from the most prolific trees? Yet, how many do this? How many give the matter a moment's consideration? We are usually thankful if our trees are true to name, without demanding that they shall be from selected stock. I would not be understood as blaming the honest nurseryman too much. He complies with the demands of his customers, and if they ask merely that the trees shall be well grown it is perhaps not to be expected that he should go farther and use scions only from the most prolific trees. But the point I would make is, that the time has come (and indeed it should have come long since) when every one, orchardist as well as nurseryman, should realize the importance of this question. Attention to this matter means that where we now have a few prolific trees among a lot of barren ones, in future the tree that bears large and profitable crops will be the rule and not the exception. It is all very well to seek for new varieties which are better than any we now have, but while doing this let us not lose sight of the fact that any variety may be vastly improved by proper attention to the selection of scions for its propagation.

F. C. SEARS.

Wolfville, Nova Scotia.

Spend Your Vacation in the Mountains.

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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.

MILK COOLERS.

Any one who has attempted to keep milk sweet for any length of time will realize how important it is to have it cool. Milk is soured by the action of bacteria, and these souring bacteria are at the height of their glory if they are allowed to live on milk at a temperature of 80° to 95°. At lower temperatures they are not so active; being slow at 60°, greatly checked at 50°, and stopped entirely at 39°. It is essential, then, that milk be cooled as soon as possible after being drawn. Many farmers and dairymen make no attempt at cooling their milk, and where they do it is often by setting a large can into a trough of water and allowing the milk to cool slowly. It is for this reason that many creamery patrons are unable to deliver their Saturday night's and Sunday morning's milk, thus losing one-seventh of the product of their cows every week. By the use of coolers, the college has been able during the hot July weather to deliver milk to the creamery in good condition forty-eight hours after being drawn from the cow. We have used two styles of coolers, the Champion and the Star.

THE CHAMPION COOLER.

as shown in the cut, consists of an open-topped cone, with thin sides and a strong bottom. This drum is provided with inlet and overflow pipes, so that running water can be used, or if desired the inlet at the bottom can be closed and the drum filled with ice water; in the latter case there is a stirring-rod that goes through an opening in the milk receiver, and by agitating this rod the cold water can be kept next to the surface. The milk-receiver, which also acts as a strainer, is in the shape of a large pan that fits over the top of the drum, and on the outer edge of the bottom is a circular row of very small holes. These holes allow the milk to pass through



CHAMPION MILK COOLER.

them in drops or very fine streams, each drop of milk thus having an opportunity to come in contact with the air and the animal odor is taken out. It then falls on the cold surface of the drum, is collected at the bottom in a small trough, and is finally conducted by a small spout into the milk can. By keeping a small stream of well water at 60° running through this cooler we have cooled milk from 90° to 64½° by once running it over this cooler, and when we desired to get the milk still lower we have run it over twice and cooled it to within 2° or 3° of the temperature of the water, and by surrounding the can with cool well water have kept it forty-eight hours. These coolers would be of excellent service to those who have running water near their place of milking. Each cow's milk could then be cooled immediately after being drawn.

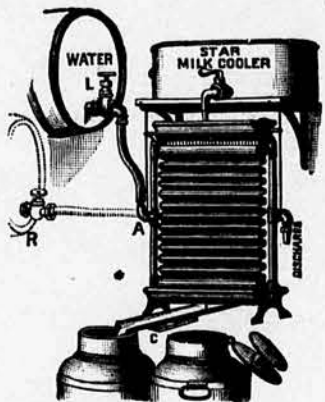
The Champion coolers can be bought at retail at from \$7 to \$10, depending on the size, and at wholesale from \$5 to \$8. When taken in lots of a dozen or over there is a big discount on the wholesale price. If creamery patrons would club together they could get these coolers, including freight, for about \$4 apiece.

The Champion Milk Cooler Company, of Courtland, N. J., has issued a neat little pamphlet on the care of milk, which will be sent free to all who ask for it.

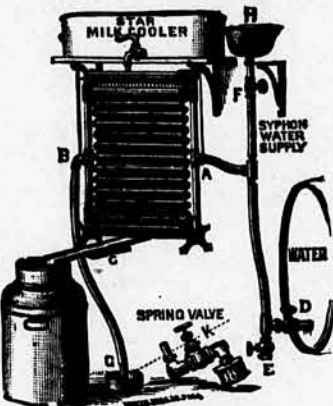
THE STAR COOLER

is built on a different plan. It is constructed of two corrugated copper sheets tinned on the outside, supported from the ceiling or fastened to a frame. The water runs between these sheets and the milk down both the outsides. As will be seen from the accompanying cuts, the warm milk is in the tank at the top of the machine and runs out from the regulating faucet over the cop-

per plates, where it is aerated and cooled. There are two different ways of running the water through this cooler—first, by having the tank sufficiently high to let the water run through by gravity; second, by means of a siphon, in which case the discharge must be six inches below the level of the water supply. When a spring is handy a spring valve can be put on and water run through the cooler continuously.



STAR MILK COOLER No. 1.



STAR MILK COOLER No. 2.

Our experience at the college is that by regulating the rate of water and the flow of milk the latter can be cooled to within 1½° and 2° of the temperature of the water running through the copper sheets. With this cooler we have cooled 600 pounds of milk in fifteen minutes. We have taken sterilized skimmed milk at a temperature of 150° and by passing it over this cooler once have reduced its temperature to 64½°, making a reduction of over 85°, and this was done with well water at 59° as the cooling medium. The Star cooler, manufactured at Had-donfield, N. J., is especially adapted to cooling large quantities of milk in a short time with a small amount of water.

It would be interesting and no doubt profitable for each patron to figure out how much he has lost every week by not being able to deliver Saturday night's and Sunday morning's milk and see how long it would take at this loss to pay for a milk cooler. D. H. O.

Herd Record.

Mr. J. W. Warren, Secretary of the Edgerton creamery, Edgerton, Kas., sends us the record of his herd. Mr. Warren says: "I kept seventeen cows in 1897; fed ground feed during the winter, oats and corn equal parts, with plenty of clover hay, corn fodder or oat straw. Fed from six to eight quarts of the grain morning and evening. Cows are not fed any grain during the summer. The cows are kept in stanchions in winter and milked in the stable all year round. Milk is sold at the Edgerton creamery, two miles distant. Just common cows are kept."

The yield of milk from seventeen cows for the year 1897 was 92,538 pounds, which contained 3,946 pounds of butter fat, an average of 4.26 per cent. The milk brought at the creamery \$656.32 and thirteen calves sold for \$65, making the total receipts from the herd \$721.32. This record shows the average income for the year from each cow for milk alone to be \$38.50, and for milk and calves \$42.43, with a yield per cow of 5,443 pounds of milk and 232 pounds of butter fat—equal to 273 pounds of butter.

The Kansas Creamery Co., in the monthly paper which they publish for their patrons, "The Primrose Bulletin," reports that Mrs. G. F. Stollenberger, one of its Colby patrons, has sent it a novel "milk can cap" that she uses in connection with her work. It is made of cheesecloth, bound with muslin, and makes a very tight-fitting cap for the cans when fastened on by the muslin in the nature of apron strings. This is a splendid protection from particles of dirt and dust that the strong breezes prevalent to Kansas swirl about a milk house or tank, where the cans are kept of ne-

cessity uncovered. Besides, it is a safeguard from the stealthy cat, as well as other marauding pests that are continually getting into the milk cans.

Jensen Creamery Co., Beloit, Kas.

The officers of this company are W. F. Jensen, President and manager; Ludolph Gabe, Vice President, and H. A. Phelps, Secretary and Treasurer. A cheese factory is operated at Beloit, creameries at Beloit, Denmark and Os-borne, and skimming stations at Asheville, Downs, Glen Elder, Green Mound, Norway, Portis, Saltville, Scottsville, Stockton, Sunflower, Victor and Walnut Grove. John Calvin, who has had twenty years experience, is butter-maker at Beloit. C. H. Goble is butter-maker and manager at Osborne, and Gabriel Acid is butter-maker at Denmark. The cheese factory at Beloit is operated by George Huckstead.

In 1897 the Jensen Creamery Co. operated one creamery and eight skimming stations and received 20,610,000 pounds of milk, with an average of 3.9 per cent. butter fat, for which it paid its patrons \$133,600. They made 856,000 pounds of butter and 26,500 pounds of cheese. The cheese is Young America, and a large part of the output is sold to patrons of the company at a uniform price of 10 cents per pound for the year. The make of the Jensen creamery in 1898 will be 30 per cent. above that of last year, caused by an increase in territory, as there has been no increase from old patrons. Some patrons have neglected their cows and the yield has fallen, while those who are interested in the dairy business have increased their yields. H. M. C.

Prize for Best Record.

The Kansas Creamery Co., Topeka, offers a prize of \$1 cash and one year's subscription to the "old reliable" Kansas Farmer to the patron who has averaged the highest returns per cow for 1897, and one year's subscription to the second highest. Also \$1 cash for the highest average returns per cow for the first six months of 1898.

This is a good move. The Kansas Creamery Co. has four churning points, thirty-five skimming stations, and 2,000 patrons. If each point works to secure the prize, the competition will be exciting and will pay both patrons and creamery. We have on our list, for the State, 162 creameries and cheese factories and 270 skimming stations. It will pay each company to follow the Kansas Creamery Co.'s plan and work up competition among its patrons. We would suggest prizes for two classes—one for patrons milking less than ten cows, and another for patrons milking ten cows or more. A record should be required of the number of cows in the herd, pounds of milk and pounds of butter fat produced. At the close of the contest, it will help all concerned if the patrons will give their methods of feeding, breeding and handling their cows. Post the records monthly, so that all patrons can watch the contest.

The Dairy department of the college is collecting records of milk and butter fat production. The work is not completed, but the returns already received show marked differences. The returns from milk per cow per year vary from \$12 to \$70. We believe that the publication of the best records of Kansas dairymen will be a strong stimulus to increased production by all Kansas milk-producers. The best records received to date have been made in the western part of the State. H. M. C.

Best Way of Promoting Kansas Dairy Business.

Editor Dairy Department of Kansas Farmer:—In your paper of July 28 there is a good subject for discussion. I refer to the article, "A New Market for Butter," by Mr. Cottrell. This little article struck right home with me, and it gives me a chance to air a few ideas. I have been considering on the magnitude of the dairy interests in this country. There is a remarkable lack of force to represent it, to lead it on to new conquests and the acquirement of the very best results obtainable. While the Sec-

"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 infringe-ments. 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 COURTLAND STREET, NEW YORK.

retary of Agriculture, Mr. Wilson, and his able assistants are doing good work, it is impossible for them to cover the whole field. Minnesota is doing better work year after year along this line, through the work of one man, Professor Haecker. The Kansas Agricultural College has started in to win, and I expect great results from that source. This work, however, will confine itself to production only. To represent the creamery and cheese men, to gain new markets, better service, better freight rates on coal and supplies, as well as dairy products, I would like to see a strong association, be it the present one or another. The saying, "In unity there is strength," teaches us this. The very country whose people Mr. Cottrell wants to be butter-eaters, Japan, has shown us remarkable progress through united and enlightened action. Let us get together and organize the Kansas Dairy Improvement Association. Make it strong financially. Let us have a Board of Directors which shall have power and means to investigate discriminations against its members; which can collect facts and figures about distant markets, and if necessary send agents, be it to Japan, China or the north pole; which can lead the fight on our ever vigilant foes, be they oleomargarine or any other adulteration of dairy products. I would like to see an association of this kind, going to the very roots of our business. Surely for every cent thus spent we would get dollars in return. Beloit, Kas. W. F. JENSEN.

Experience teaches the value of Hood's Sarsaparilla. It is constantly accomplishing wonderful cures and people in all sections take it, knowing it will do them good.

Hood's Pills cure all liver ills. Mailed for 25 cents by C. I. Hood & Co., Lowell, Mass.

Grand Encampment, Knights of Pythias and Supreme Lodge Session, Indianapolis, Ind., August 22-29 and August 30 to September 10, 1898.

Round trip tickets on sale at Santa Fe Route ticket offices August 19, 20 and 21 for \$16.05, limited to August 30, with provision for extension to September 10. Depot 'phone 682; North Topeka 'phone 364.

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

Running the mower over pastures to cut off the stuff that stock will not eat is a good weed killer and pasture renovator.

\$16.05 to Indianapolis and return via Santa Fe Route. Tickets on sale August 19, 20 and 21.



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.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending August 15, 1898, prepared by T. B. Jennings, Section Director.

GENERAL CONDITIONS.

Warm days with smoky atmosphere, followed by cool nights during which the smokiness would largely disappear, characterized the week. Light local showers occurred in the northern half of the State; fine rains fell throughout the southern half, heavy in all of the Arkansas river counties east of Kearny, being excessive in Reno, Sedgwick and Butler and the counties south of them.

RESULTS.

EASTERN DIVISION.

A consensus of special reports indicates that the late corn will not be safe from frost until October 1, except in the extreme south, where September 15 will probably find it matured; early corn will generally be out of danger by September 1, except in the northern counties, where it will be about the 15th. The smoky days and cool nights, with copious dews, have greatly improved the corn and pastures but interfered somewhat with haying, as the cut grass would not cure rapidly. Plowing is being pushed, with the ground generally in fine condition. Grapes are a better crop in the southern than the northern counties.

Allen county.—Fine week for haying and threshing; grapes are ripe.

Anderson.—A cool week; corn maturing with insufficient moisture; pastures good.

Atchison.—Rain enough to keep corn alive; corn retarded by dry weather and cool nights; grapes ripening, but a short crop; late potatoes look well.

Bourbon.—Early corn developing finely, late corn doing well; rapid progress in saving hay crop; apple crop next to failure.

Chase.—Excellent week for corn and fruit; ground in fine condition for plowing; first ripe grapes on market; ripe peaches scarce.

Chautauqua.—Plowing and haying latter part of week, too wet first part; corn will be a large crop; cattle doing finely, with pastures unusually fine for time of year.

Cherokee.—Fine week; heavy dews interfering with flax threshing and damaging the flax; corn in fine condition.

Coffey.—A good week but too smoky and

ons and some peaches on market; pastures in good condition.

Riley.—Conditions this week helped corn very much, though much has been destroyed; temperature 3.5 degrees below normal, and rainfall .50 inch below; pastures are fine.

Shawnee.—Cool nights and hazy days; haying well along, quantity disappointing, tall but not thick on ground; corn, apples and peaches doing well.

Wilson.—Plowing for wheat progressing rapidly; a good crop of hay is being saved; early corn is hard.

Woodson.—Corn is in fine condition with better prospect for crop than last August; prairie hay a big yield and being secured in good condition.

MIDDLE DIVISION.

Special reports indicate that the early corn will be safe from frost by September 1 in the southern counties, September 10 to 15 in the central, and September 20 in the northern; late corn is not considered safe before October 1. The rains and cooler weather have improved corn and pastures in the central and southern counties, but favorable conditions did not obtain in the northern. Much wheat has been damaged in stack and shock by wet weather, and in summer the stacks had to be scattered to dry.

Barber.—Owing to late rains the largest crop of corn and feed-stuff is now in prospect; pastures in fine condition; cattle doing well; plowing for wheat and rye.

Barton.—The showers did corn some good but it was too far gone to make much of a crop; plowing begun; more rain needed.

Butler.—The rains have made a light crop of corn of good quality reasonably certain, but have done much damage to wheat; wheat in shock in bad condition, that in stack but little better; much corn ruined before the rain.

Cloud.—Pastures short and dry; corn in bad condition; more land than usual being plowed for wheat under unfavorable conditions; threshing about half done; wheat going into the granaries dry in fine condition.

Cowley.—A fine week for crops and fall plowing, but wheat in shock badly damaged by the rains; haying is progressing rapidly and many will get a second cutting; much of the corn out of the way of frost now; fruits scarce.

Dickinson.—Last week's rain improved corn very much, will make fair crop ex-

Summer.—The heavy rain stopped plowing and threshing; wheat stacks had to be scattered to dry; hazy all week.

Washington.—Too dry to plow; corn will make a small crop, some pieces very good, many very bad; haying nearly done; seedling will be late.

WESTERN DIVISION.

It is estimated that early corn will be safe from frost by September 15, late by October 1. Good growing weather has prevailed in the south half. Crops are in fine condition in the southern counties and greatly improved in the central, and the range is furnishing good pasturage and cattle are in fine condition. Drier weather prevailed in the north half, and though crops are generally in fair condition, much improvement has not been noted, yet the forage crops promise well.

Clark.—Good growing weather; wild haying going on; Kaffir corn and cane doing well; pasture grasses the finest in years; grasshoppers numerous.

Decatur.—A dry, bright, hot week; corn still looks well, no injury reported; grass still good but buffalo beginning to turn yellow; need rain very much; grasshoppers not increasing.

Finney.—Fine rain; sorghum feeds growing rapidly; range first-class.

Ford.—A fine corn crop nearly assured; third crop of alfalfa coming on finely; range grass very good, cattle fat.

Gray.—Fine rain; forage fine; not much threshing done yet.

Greeley.—Crops are growing finely; stock doing well; grasshoppers eat around the edges of fields but have done no material damage.

Hamilton.—Hot in daytime and cool at night; all crops are doing well.

Kearny.—Late crops are doing remarkably well; corn is good; fodder crops large;

apples and peaches being marketed freely; pears will be a fair crop, blight complained of.

Ness.—A favorable week for crops not killed by the drought; early corn much better than expected, late corn greatly improved in the south, but will make little better than fodder in the east part; not much threshing done yet, best grain yet to be threshed; range grass greened up and stock are doing finely.

Norton.—Hard week on corn; cool nights, hot days; corn in fair condition; second crop of alfalfa harvested in fine condition; potato crop good; much of small grain stacked; pastures fair; prairie hay good.

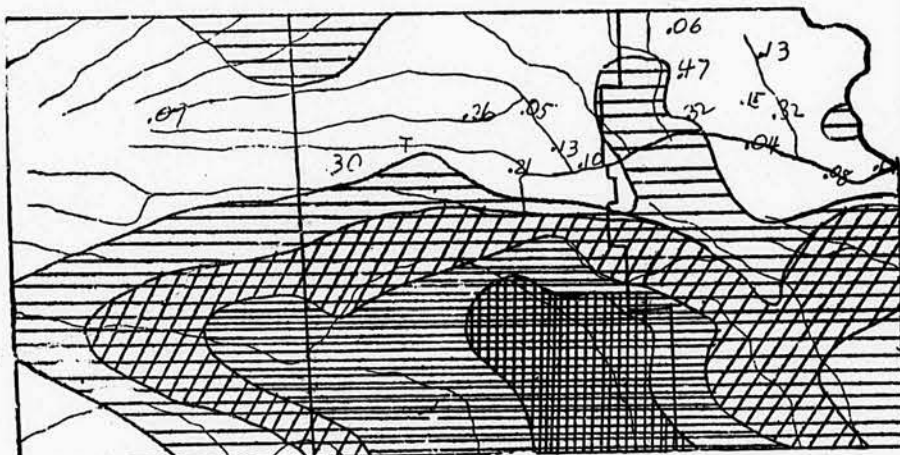
Thomas.—Corn is doing fairly well, but ground is getting very dry; Kaffir corn and cane will make fine crops; hay fair; hazy and smoky four days.

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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.

\$16.05 to Indianapolis and return via Santa Fe Route. Tickets on sale August 19, 20 and 21.



SCALE LESS IN INCHES THAN 1/2 1 1 1/2 2 3 4
ACTUAL RAINFALL FOR WEEK ENDING AUGUST 13, 1898.

hazy to allow hay to cure well; early corn about made, the middle planting in the milk, late planting just graining; grapes ripening; haying; flax threshing.

Crawford.—Chinch bugs are killing corn in places; late corn will probably not be safe from frost before October 1.

Doniphan.—Good week for corn; threshing delayed by rain; wheat turning out poorly, oats fairly good; apples the smallest crop for years.

Douglas.—Threshing mostly over, yield poor; early corn safe from frost middle of August, late by September 1.

Elk.—A good week for haying and a large amount of hay being put up; corn doing well.

Franklin.—Condition favorable to growing crops; threshing in progress, flax yields half a crop, oats light and trashy, wheat generally poor but some fields fairly good.

Greenwood.—Ground in excellent condition for fall plowing; corn doing well; haying progressing, quality good.

Jackson.—Ground generally very hard and dry, but little plowing being done; late corn just tasseling in the north part.

Jefferson.—Corn holding its own well but needs a good rain; flax threshing progressing, fair yield; wheat yield very poor, with small grain.

Johnson.—Threshing progressing; flax, wheat and oats poor yield; hay is good, pastures good; peach and apple crops nearly failures; prospect for corn crop is very good; 10 per cent. of the corn has not tasseled yet.

Labette.—A fine week for plowing and haying; corn doing well; pastures in good condition.

Leavenworth.—Haying nearly done, good crop; threshing wheat, fair crop; grapes mostly rotted; small crop of peaches ripening; flax gathered, fair crop; pastures fair, cattle in good condition; corn improving; late potatoes good.

Lyon.—All conditions are favorable to good crops of hay and corn; fruits fairly good.

Marshall.—Corn has improved but will be a short crop; ground still too hard to plow; threshing progressing, yield and quality of wheat and oats better than expected.

Montgomery.—Cool, moist week; crops as fresh and green as in May; a smoke-haze in the day, heavy dews at night.

Morris.—A cool, dry week; corn holding color well; fall plowing nearly finished; some apples falling; peach crop poor; grapes fine.

Neosho.—The corn crop will be large in county; grapes abundant and of good quality.

Osage.—Corn doing well but needing more rain; still haying; grape crop small; mel-

cept in southwest part of county; Kaffir corn and sorghum will make large crops.

Edwards.—Last Saturday's rain has greatly benefited the corn crop, the early-planted grown in clean fields will be good merchantable corn.

Harvey.—A cool week with smoky atmosphere; threshing at a standstill; plowing again progressing; corn now well advanced.

Kingman.—Saturday night's rain damaged wheat in stack and shock; too wet to thresh; corn and pastures improved.

Marion.—The weather this week has improved grass; plenty of rain for plowing; sorghum in good condition for a large crop.

Mitchell.—Another hot, dry week; grapes dried on defoliated vines; peaches drying up on trees; threshing going on rapidly, yield large and quality extra; oats light; corn badly injured, though portions favored with showers will make a partial crop.

Osborne.—Corn drying up, lowland about half a crop; hay being put up; too dry to plow well.

Ottawa.—Dry week, hot days and cool nights; haying and corn-cutting general, not a nubbin except in the draws; hay crop very light; threshing going on rapidly, yield more than last year; pastures dried up.

Phillips.—A hot, dry week; corn doing fairly well in west half of county, poorly in east half; stock doing finely; wheat and oats turning out poorly.

Reno.—A cool, quiet week; the recent rains greatly benefited late corn and a moderate crop is now promised; wheat has turned out a good yield in quality and quantity; prairie hay is making a fine growth; plowing in progress; cane and Kaffir looking well and heading; alfalfa growing finely and will make a good third cutting.

Rush.—Cool, quiet week; favorable for threshing; wheat yield disappointing; plowing in progress; corn being damaged some by grasshoppers.

Russell.—Cool nights, warm days; corn not improved, too dry; much corn fodder and hay being cut.

Saline.—A warm, dry week with a smoky, hazy atmosphere, almost obscuring the sun at times.

Sedgwick.—Smoky atmosphere; wheat in stack and shock in bad condition on account of wet weather; pastures excellent; apple crop short; grapes excellent; fine hay crop; some fields of corn are good, many are fair, some are poor; stock in pasture improving rapidly; fall plowing begun.

Stafford.—A fine week for corn and grass, too wet for threshing; wheat badly damaged in stack; corn will make a full crop; plowing for wheat.

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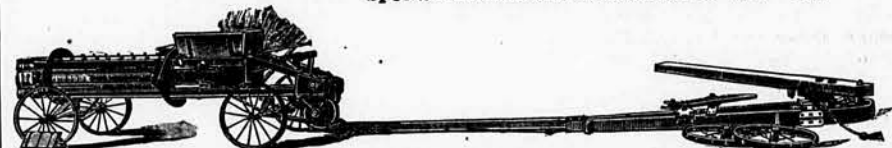
Write for particulars, prices and testimonials of thousands of American stockmen who have successfully "vaccinated" their stock during the past three years in Dakota, Nebraska, Wyoming, Colorado, Kansas, Texas, etc.

PASTEUR VACCINE CO., 52 Fifth Avenue, CHICAGO.

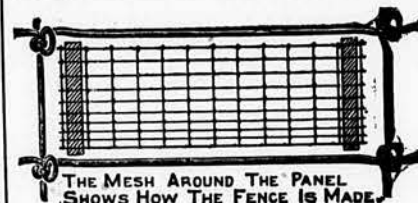
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PERFECT FARM FENCE

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.

Superiority Under all Conditions

Has won the favor and approbation of all riders who have purchased

Columbia Bevel-Gear Chainless Bicycles, \$125.

It is generally admitted by them that the Columbia Bevel-Gear Chainless is over a mile faster in the hour on ordinary roads than chain wheels, and that it has 10% advantage in hill climbing.

Rides Easily, Smoothly and Silently.

COLUMBIA CHAIN WHEELS, - - \$75
HARTFORD BICYCLES, " - 50
VEDETTE BICYCLES, " - \$40 AND 35

POPE MFG. CO., Hartford, Conn.

Culver & Bailey, Columbia Dealers, Topeka, Kas.

The Fruit Tree Bark Beetle.

(Scolytus rugulosus, Ratz.)

Editor Kansas Farmer:—Within the past month the attention of the writer was called by Mr. Hall, the assistant in Horticulture, to some plum trees that were suddenly dying in an orchard near the college grounds. Upon examination the writer at once discovered that the trees were thickly inhabited by the fruit tree bark beetle (Scolytus rugulosus), which, as far as can be ascertained from the records of the Department of Entomology, appears to be the first occurrence of this pest in this State.

The trees that were worst affected were two plum trees, one a Wild Goose and the other a Botan. There were other trees that showed plain evidences of the work of this pest but not to such an extent as the first two mentioned. These two trees seemed apparently to be making a thrifty growth till about the first of July, when the bark of the twigs became dried up and shriveled, and the leaves began to wither and turn yellow, and finally to fall to the ground. To all appearances the trees looked as if attacked by some blight. It was about this time that the writer made his examination. Then the adults were to be seen in great numbers, either crawling about the tree or flying from one branch to another, or burrowing into the bark. On the sunny side of the trees on the trunks, particularly at the bases of the main limbs, were numerous small holes, less than one-sixteenth of an inch in diameter, from which sap was exuding in large quantities. Similar holes were to be found on the small twigs and branches but they were not so numerous as on the trunks. Steps were immediately taken to combat the pest. One tree was so badly infested that it was immediately cut up and destroyed and the others were thoroughly sprayed with a strong wash.

The fact that this pernicious pest has made its appearance in one part of the State would lead one to suspect its presence in other parts. As the insect is a difficult one to combat, prompt and effective measures should be taken as soon as its presence is detected. The following facts regarding its life history and the means for combating it will no doubt be timely.

This insect was first observed in the United States about the year 1877, when it was doing considerable damage to peach trees in Elmira, N. Y. In 1880 it was present in New Jersey, Pennsylvania, Missouri, Maryland and the District of Columbia. In 1884 it was reported from Massachusetts and Georgia, and in 1885 it was doing considerable damage in North Carolina. In a recent publication of the Division of Entomology, United States Department of Agriculture, it was reported as being present in eighteen States and one Territory, extending from "Massachusetts, New York and Michigan in the North to Alabama and Georgia in the South and Missouri and Arkansas in the West."

The trees most subject to injury are the plum, peach, cherry and apple. The pear, apricot, nectarine and quince trees are recorded as having received slight injuries. Trees that are weakened by disease or are injured by other borers or insects seem to be more liable to attack. There are many instances on record, however, in which to all appearances strong and healthy trees have succumbed to the attacks of this insect. A vigorous flow of sap will often compel the beetles to abandon a tree without seriously mining it or depositing eggs within it, but it is possible that a tree of this sort may be so weakened by the continued attacks of these insects that the flow of sap ceases to repel. Then the fate of the tree is sealed unless vigorous measures are taken for its protection.

The cause of this injury is a small beetle about one-tenth of an inch long by about one-third as wide. It is blackish in color with the exception of the tips of the wing covers and the lower parts of the legs, which are reddish. The life history of the insect is about as follows: The parent beetles appear in March or April, when they may be found crawling about the trunk of the tree or burrowing into the bark. As soon as the female has penetrated to the sap wood she commences to construct a central burrow, on each side of which little notches are made to receive the very small eggs. The larvae or grubs soon hatch and begin to make burrows which diverge from the parent channel. As the larvae increase in size their channels become longer and broader, varying from one-half to two inches in length. When full-grown the larvae make a slightly enlarged chamber in which they pupate, and upon transforming into beetles they make their way out through little round holes in the bark and escape. As a rule, many of these beetles return to the tree from

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which they have escaped and thus increase the injury that has already been done. Sooner or later the tree dies from the destruction of the cambium layer. It takes about one month for the insect to complete its transformations, and during the summer there may be several broods.

If no efforts are made to prevent the attacks of these different broods the trees will be found to be riddled with small holes less than one-tenth of an inch in diameter. These holes will be more numerous on the south side of the tree along the trunk and main branches. When the smaller twigs and branches are attacked the injury will be shown by the wilting and falling of the leaves, while injuries to the trunk and limbs will be shown by the exudation of the gum from the wounds.

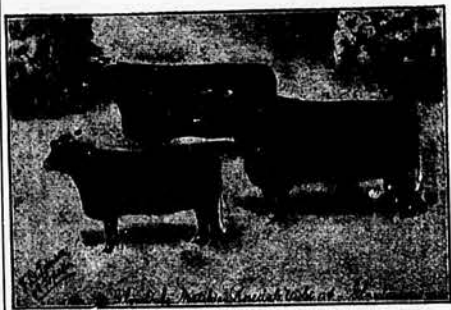
The insect is a difficult one to combat successfully. Keep the trees in a healthy condition. This will greatly assist them in resisting and recovering from the attacks of the pest. Also make it a practice to keep the orchard free from all brush-wood and dead limbs and twigs which are liable to be centers of infestation. If any of the trees are badly infested, dig them up and burn them. They will soon die, anyway, and are a constant element of danger to surrounding trees and orchards. If a tree is but slightly injured, prune and burn the infested parts. Stimulate growth by fertilizers. Protect the tree by some repellent, as whitewash with a small amount of Paris green, or, what is better, spray the tree thoroughly with a solution of strong whale oil soap suds, say one pound of whale oil soap to eight gallons of water with about four ounces of crude carbolic acid. Those desiring further information regarding the pest should write to the Division of Entomology, United States Department of Agriculture, for Circular 27, Second Series, from which the writer has secured many of the facts in the present article. PERCY J. PARROTT, Assistant Entomologist, Manhattan, Kas.

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.

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MARKET REPORTS.

Kansas City Live Stock.

Kansas City, Aug. 15.—Cattle—Receipts since Saturday, 6,724; calves, 600; shipped Saturday, 516 cattle; 120 calves. The market was steady to 10c lower. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.
22.....	1,455 \$5.25	59.....	1,406 \$4.15
19.....	1,392 5.05	41.....	1,102 5.00
40.....	1,149 4.95	59.....	1,205 4.95
20.....	1,104 4.75	16.....	1,062 4.60

60 Tex.....	1,430 \$5.00	65.....	1,152 \$4.75
20.....	1,224 4.50	42.....	1,079 4.15
3.....	1,050 4.00	72.....	1,067 3.85
3 T. stk....	67 3.00	2.....	990 3.50

4 s&h.....	812 \$4.85	24 s&h.....	657 \$4.75
1.....	1,040 4.50	1.....	630 4.00
5.....	840 4.00	2.....	215 3.75
1.....	740 3.60		

1.....	920 \$3.90	2.....	1,275 \$3.75
2.....	1,235 3.50	7.....	844 3.25
1.....	810 3.00	1.....	1,000 2.75
1.....	1,200 2.50	1.....	1,030 1.50

19.....	500 \$4.85	7.....	581 \$4.70
5.....	754 4.50	18.....	893 4.37
22.....	730 4.10	2.....	455 4.00
2.....	855 3.75	1 J.....	890 3.00

Hogs—Receipts since Saturday, 5,618; shipped Saturday, 314. The market was steady to 5c lower. The following are representative sales:

60...320 \$3.90	61...235 \$3.90	59...289 \$3.90
79...242 3.87 1/2	74...275 3.87 1/2	64...290 3.85
65...296 3.85	70...292 3.85	61...240 3.85
75...252 3.82 1/2	73...236 3.80	62...280 3.80
77...241 3.80	72...243 3.80	51...289 3.80
86...222 3.77 1/2	77...232 3.75	70...261 3.75
70...215 3.75	77...228 3.75	65...258 3.75
18...200 3.70	67...219 3.70	78...188 3.70
79...212 3.67 1/2	5...210 3.65	77...309 3.65
46...241 3.65	58...205 3.65	64...208 3.65
11...279 3.61 1/2	1...560 3.50	37...166 3.50
46...150 3.50	4...05 3.50	8...346 3.50
2...350 3.50	19...128 3.40	7...150 3.40
1...120 3.40	15...130 3.40	21...129 3.40
5...290 3.35	30...119 3.35	5...118 3.30
5...131 3.30	1...130 3.30	1...530 3.25
5...293 3.15	22...141 3.15	1...320 3.00
19...91 2.50	7...92 2.50	1...400 2.50

Sheep—Receipts since Saturday, 1,053; shipped Saturday, 583. The market was active and strong. The following are representative sales:

8 N. lms....	58 \$5.75	2 N. lms....	75 \$5.50
38 stk. lms..	52 4.50	48 sw.....	96 4.10
264 sw. stk..	74 4.05	247 sw. stk..	54 3.50
41 fdrs.....	80 3.85	9 bck lms..	44 3.25

St. Louis Live Stock.

St. Louis, Aug. 15.—Cattle—Receipts, 3,000; market steady for natives and easy for Texans; native shipping steers, \$4.50@5.50; light and dressed beef and butcher steers, \$3.00@5.30; stockers and feeders, \$3.00@4.40; cows and heifers, \$2.00@4.80; Texas and Indian steers, \$2.85@4.45.

Hogs—Receipts, 4,000; market 5c lower; yorkers, \$3.80@3.85; packers, \$3.80@3.90; butchers, \$3.85@3.95.

Sheep—Receipts, 2,000; market strong; native muttons, \$3.70@4.25; lambs, \$4.00@6.25; Texas sheep, \$3.70.

Chicago Live Stock.

Chicago, Aug. 15.—Cattle—Receipts, 19,000; market weak and 10c lower; beefs, \$4.10@5.55; cows and heifers, \$2.20@4.40; Texas steers, \$3.20@4.30; westerns, \$3.50@4.60; stockers and feeders, \$3.20@4.80.

Hogs—Receipts, 35,000; market slow to 5c lower; light, \$3.00@3.90; mixed, \$3.60@3.97 1/2; heavy, \$3.55@4.02 1/2; rough, \$3.55@3.65.

Sheep—Receipts, 10,000; market strong and 10c higher; natives, \$3.25@4.80; westerns, \$3.85@4.70; lambs, \$4.25@6.80.

Chicago Grain and Provisions.

	Aug. 15.	Opened	High'st	Low'st	Closing
Wht—Aug....	69 1/2	70 1/4	69 1/4	69 1/2	69 1/2
Sept.....	65 1/2	66	64 1/2	65	65
Dec.....	63 1/2	64	63 1/2	63 1/2	63 1/2
Corn—Aug....	32 1/2	33	32 1/2	32 1/2	32 1/2
Sept.....	32 1/2	32 1/2	32 1/2	32 1/2	32 1/2
Dec.....	32 1/2	32 1/2	32 1/2	32 1/2	32 1/2
Oats—Aug....	20 1/2	20 1/2	20 1/2	20 1/2	20 1/2
Sept.....	20 1/2	20 1/2	20 1/2	20 1/2	20 1/2
May.....	23 1/2	23 1/2	23	23 1/2	23 1/2
Pork—Aug....	9 15	9 15	9 05	9 10	9 10
Sept.....	5 32 1/2	5 35	5 30	5 30	5 30
Oct.....	5 37 1/2	5 40	5 35	5 35	5 35
Ribs—Aug....	5 25	5 27 1/2	5 20	5 25	5 25
Sept.....	5 27 1/2	5 30	5 22 1/2	5 25	5 25

Kansas City Grain.

Kansas City, Aug. 15.—Wheat—Receipts here to-day were 432 cars; a week ago, 320 cars; a year ago, 763 cars. Sales by sample on track: Hard, No. 1, 69@70c; No. 2 hard, 65@69c; No. 3 hard, 62@66 1/2c; No. 4 hard, 60@63 1/2c; rejected, 57@59c; no. grade, 55c. Soft, No. 2, 70 1/2c; No. 3 red, nominally 66@68c; No. 4 red, 63c; rejected red, nominally 57@60c. Spring, No. 2, nominally 64@65c; No. 3 spring, 60 1/2@64 1/2c; rejected spring, nominally 55@59c.

Corn—Receipts here to-day were 82 cars; a week ago, 53 cars; a year ago, 146 cars. Sales by sample on track: Mixed, No. 2, 28 1/2@29c; No. 3 mixed, 28@28 1/2c; No. 4 mixed, 27 1/2@28c; no grade, nominally 25@26c. White, No. 2, 29 1/2@29 1/2c; No. 3 white, 29@29 1/2c; No. 4 white, 27 1/2@28c.

Oats—Receipts here to-day were 15 cars; a week ago, 19 cars; a year ago, 33 cars. Sales by sample on track: Mixed, No. 2, nominally 23@23 1/2c; No. 3 mixed, 22 1/2c; No. 4 mixed, nominally 18@20c. White, No. 2, 24 1/2@25c; No. 3 white, 24c; No. 4 white, nominally 23c.

Rye—No. 2, 47@48c; No. 3, 47c; No. 4, nominally 45c.

Hay—Receipts here to-day were 116 cars; a week ago, 66 cars; a year ago, 105 cars. Quotations are: Choice prairie, \$5.25@5.50; No. 1, \$5.00@5.25; choice timothy, \$7.00@7.25; No. 1, \$6.25@6.75; clover and timothy, No. 1, \$6.00@6.25; No. 2, \$5.00@5.50.

Kansas City Produce.

Kansas City, Aug. 15.—Eggs—Strictly fresh, 10 1/2c per doz. Butter—Extra fancy separator, 18c; firsts, 16 1/2c; dairy, fancy, 16c; store packed, 13c; packing stock, 11c.

Poultry—Hens, 6 1/2c; broilers, 9c per lb.; roosters, 15c each; ducks, 5c; young ducks, 7c; geese, 4c; goslings, 7c; hen turkeys, 7c; young toms, 6c; old toms, 6c; pigeons, 50c per doz.

Fruit—Grapes, 25@30c per peck. Peaches, \$1.00@1.25 per 6-basket crate. Apples, 40@60c per 1/2 bu.

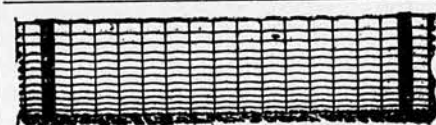
Vegetables—Roasting ears, home grown, 5@6c per doz. Tomatoes, home grown, \$1.00 per bu. Cucumbers, 15@20c per doz. Peas, home grown, marrowfat, \$2.00 per bu. Green and wax beans, 60@75c per bu. Lettuce, home grown, 30@50c per bu. Onions, new, 25@30c per bu. Beets, 25c per 3 doz bunches. Cabbage, home grown, 50@65c per 100-lb. crate. Celery, 40@50c per doz.

Potatoes—Home grown, 25@30c per bu. in car lots. Sweet potatoes, home grown, 75c per bu.

Grand Encampment, Knights of Pythias and Supreme Lodge Session, Indianapolis, Ind., August 22-29 and August 30 to September 10, 1898.

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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.

Coming Poultry Shows.

Kansas State Poultry Association.—J. W. F. Hughes, Secretary, At Topeka, January 9 to 14, 1899. C. H. Rhodes, judge.
Wichita, State Fair, Kansas.—H. O. Toler, Secretary, Wichita, Kas. September 19-24, 1898. C. H. Rhodes, judge.
Garden City Poultry and Pet Stock Association.—A. S. Parson, Secretary, Garden City, Kas. Show September 13-16, 1898. C. H. Rhodes, judge.
Abilene Poultry and Pet Stock Association.—Roy O. Shadinger, Secretary, Abilene, Kas. Second annual exhibit, at Abilene, January 25-28, 1899. Theo. Sternberg, judge.
Butler County Poultry and Pet Stock Association.—C. H. Pattison, Secretary and Treasurer, El Dorado, Kas. Second annual exhibit at El Dorado, Kas., December 20-23, 1898. C. H. Rhodes, judge.
Topeka Poultry Association.—J. W. F. Hughes, Secretary, Topeka. Exhibit January 9-14, 1899, in connection with State show.

CHICKS IN SUMMER—IV.

GAPES—SYMPTOMS.

No one need ever mistake the symptoms of this often fatal disease. The gaping of the mouth, or more properly, gaping for breath, can never be mistaken when once seen. And when first noticed among the flock, no time should be lost in entering upon a course of treatment, for whole flocks have been exterminated in a few days, where it has become epidemic. The

CAUSE

is a small red or reddish worm, which lodges and fastens itself in the trachea or windpipe of the patient, the irritation incident thereto causing a secretion of mucus, which, as it increases in quantity, cuts off or chokes up the passage to the lungs, causing the chick to gasp for breath, and unless quickly removed, death from choking will ensue. Authorities differ as to how this worm gets into the chick's throat. The most generally accepted theory at present seems to be that it is picked up and swallowed from infested ground, or with the common earth- or fish-worm. Cases, however, have been known where the chicks had no opportunity to get earth-worms.

Another theory, quite as reasonable, I think, is that the chicks are infested through the hens while brooding; the chicks picking up the eggs discharged in the droppings of the mother hen. One thing, however, is certain, that the ground occupied by poultry becomes thoroughly infested, if the disease becomes prevalent, and cannot with safety be used again until thoroughly disinfected. In fact, it is safest, even when disinfected, to remove the runs and not use the ground for poultry for at least a year.

TREATMENT.

One of the most generally recognized methods of treatment is to take a feather (a flight feather out of the wing is about right), strip the web off to about three-fourths of an inch of the point, dip the feather in sweet oil in which is incorporated a drop of turpentine to a teaspoonful of the oil, then grasp the chick's head with the left hand, holding the mouth open, the feet and legs being held firmly between the knees of the operator. A good time to perform this operation is at night, having a strong light facing you. Looking down the throat, the windpipe can be seen opening and closing as the chick breathes.

With the oiled feather in the right hand, push it down the windpipe two or three inches, according to the size of the bird; give the feather a quick turn, pinch the windpipe slightly, pushing up until the throat is reached. The knot of worms and mucus generally follows, or is soon sneezed up by the chick. The oil and feather loosens the hold on the windpipe, and in nine cases out of ten the cure is immediate. If, after a few days, the chick continues to gape, the operation should be repeated, being sure that the windpipe is reached instead of the passage to the crop. Always treat the chicks as soon as gaping begins, as then the cure is more certain.

Many use a horsehair twisted into a loop, much in the same manner as I have described for the feather, except without the oil and turpentine. There is also a small instrument made specially for the purpose, which can be bought at all supply houses. For small chicks, I would suggest using the tincture of asafoetida or a mixture of asafoetida and tincture gentian, in place of

the oil and turpentine, as it is not so irritating to the windpipe and answers the same purpose. Then a few grains of powdered gentian and a few drops of the tincture of asafoetida mixed with a double handful of soft food will have a magical effect in slight attacks, and may also be used as a safeguard against spread of the disease.

A teaspoonful of spirits of turpentine, mixed in a quart of meal, moistened and fed to the chicks, is also recommended, and is simple enough to try, at least.

Another remedy is to fill a small paper bag with dry slacked lime, and into the opening thrust the head of the fowl to be treated, closing the mouth of the sack by pressing it about the chicken's neck. Then shake the bag, filling it with dust, which the chick is forced to breathe. This operation is repeated twice, the fowl's head being removed between shakes to enable it to get a breath of fresh air. The lime being inhaled, coming in contact with the worm, kills it, and a cure is speedily effected.

PREVENTION.

This troublesome and fatal disease often breaks out in some of the best regulated yards. But this is no reason why preventive measures should be neglected. First and foremost, it is imperative that chickens should be cooped and reared on untainted ground. I cannot too strongly impress on the minds of all who read this article, the indisputable fact that a large percentage of attacks of gapes are directly due to picking up the ova of the worm on polluted ground.

If poultry has been kept on the ground previously, to be on the safe side, the ground should be spaded or plowed thoroughly two or three times each year. This will not only act as a preventive to this disease, but will also sweeten it, especially if a crop of something green—oats, rye, millet or most any grass—is kept growing, and will enhance the general health of the flock. A good plan is to have the yards divided, so each part can be sown to some grass crop alternately.

As a preventive measure, a writer in Ohio Farmer recommends a teaspoonful of powdered copperas, dissolved in water, and mixed with the morning feed, to every 100 chicks, to be given every morning until large enough to be out of danger. The copperas to be increased or diminished in proportion to the number of chicks.

However, for my own part, I prefer the sanitary measures as above, giving no drugs as long as it can be avoided. Cleanliness and proper food will do more to ward off the disease than anything else.

If it is true, as suggested above, that the worms or their ova are produced by the mother hen, from which the chicks become infested, then the escape from this most destructive pest of poultry seems to be easy. Simply get rid of it by treating the hens, and the chicks will be safe. This may be done by giving the hens small doses of turpentine or other simple vermifuges, during the winter, and keeping the flock on fresh ground or that deeply plowed and often renovated. In connection with turning the surface soil, or even without it, use plenty of air-slacked lime. It is death to all worms or eggs or germs of other diseases with which it comes in contact.

I should like to hear from other experienced poultry-raisers on this subject. If I am wrong, the sooner I find it out the better for me and others.

Selling.

In making the most of poultry it is quite an item not to keep any unprofitable fowls. For this reason it is nearly always best to sell all of the cockerels as soon as they reach a marketable age, and especially so when a fair price can be realized. Sometimes, of course, it will be best to feed to maturity, but, as a rule, this should not be done, as, after the market gets well supplied with broilers, prices generally get lower; and, while it costs but little to feed poultry during the summer while they can have free range, yet the feeding adds to the cost, and the gain in growth will not always pay the cost of feeding, while there is always, also, a risk of loss to be considered. Matured roosters, outside of what are needed for breeding purposes, are a needless expense, and, in a generality of cases, should be marketed at the first opportunity.

Then, the young pullets can often be disposed of as early broilers. Of course, it is always best to select out a sufficient number of the best and earliest pullets for layers next winter. Outside of this, the rest should be marketed as soon as a fair price can be realized. Then, the old hens that have passed their prime should not be kept. Generally, a hen is past her best when over two years old. Of course, some that are

extra good breeders or mothers it will be best to keep longer; but the bulk of the matured hens can be marketed to an advantage any time when a fair price can be obtained. By only keeping fowls that are growing well, or that are good layers, a much better profit is realized. Eldon, Mo. N. J. SHEPHERD.

Moulting Season.

It is a very important point at this season of the year to have the fowls moult early. Of course it is well understood that the younger the bird, the earlier it moults. This applies to last year's pullets, and they will, if properly fed and cared for during the winter and spring, be inclined to moult during July. Still, valuable assistance can, even now, be given them to compel them to shed their feathers early.

Moulting is the provision of nature by which the fowl renews its dress each year. It is the casting off of the old feathers and putting on new ones. But for the "shedding of the feathers," which is a characteristic of all birds, the body would in time become naked, owing to broken feathers and other causes. Nature thus permits the feathered tribe to put on a new garb each year, and this occurs just before the winter sets in, though the period of moulting depends greatly on the age of the bird.

The new feathers cannot grow until the old ones are off; therefore a systematic feeding is necessary to compel an early moult. The soft morning mash becomes useful here, and it can be safely fed every other morning, and a portion of linseed meal introduced, making

A WELL BALANCED RATION.

as follows: One-quarter bran, one-quarter ground wheat and oats, one-quarter corn meal and one-quarter linseed meal. About twice a week add a small portion, say 10 per cent., of beef scraps to this mash, and it will be found to form a good balanced ration.

The greatest care must be taken to keep the fowls in good condition during the moulting season. It is a drain on their vital powers to furnish the material for a full coat of new feathers. There is apt to be a laxity of attention to the flock during this period on account of their cessation of laying, when, in fact, there should be more care taken. It is a good plan to select all the fowls that it is desired to winter or keep for breeding, and market the balance. This will cut down the expense of the moulting season.

Hens which will moult early, if they are in good condition and comfortably housed, will nearly always make

THE BEST WINTER LAYERS.

while the later moulters will rarely lay until spring. These latter should be given a place where they can keep warm and dry and be given also an abundance of nutritious food. The period of moulting may be materially shortened by careful attention and a generous supply of food rich in muscle, bone and feather-forming materials rather than fat-making foods. Always provide pure, fresh water, and keep the quarters clean. As indicated above, wheat, oats, linseed meal, bone meal, meat scraps and fresh ground bones makes a much better food at this time than corn or anything that may be considered a fattening ration. Sunflower seed is also an excellent food at this time, the oil contained in them assisting in loosening the feathers, acting on the same principle as linseed meal. While it may not be best to feed the fowls all they will eat, in nearly all cases liberal feeding and the supplying of a good variety will be found the most desirable thing to do. The fowls need, also, to take sufficient exercise to be healthy. If they have free range during this period, they will have a better opportunity of supplying their needs, but if the feathering process is extended over too much time, they become exhausted, and on the first exposure to

Save the Pennies.



The butter fat left in the skim-milk by the old process dairymaking would go a long way toward educating the boys and girls if saved and converted into fine flavored, high quality butter.

THE SHARPLES SEPARATORS

will save the butter fat and make it sell at

the highest market price. Learn all about them in our free circulars.

BRANCHES:

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

P. M. SHARPLES,

West Chester, Pa.

cold or a rain storm the croup attacks them and their career is at once ended. But,

FEED ALONE IS NOT ENOUGH,

nor will it accomplish the whole result. Breeding pens should be broken up just as soon as the egg supply begins to diminish, thus separating the males from the females. Hens fed liberally during the laying season are apt to take on flesh, or grow fat; but during the moult they need this liberal supply of food to assist them in growing the new feathers. By giving them free range, they will keep in much healthier condition, and the food will assimilate better. The older hens—those a year, two years, or even three years old—will pay better in the fall as layers, when eggs are higher in price, than in the spring when eggs are cheaper. When the pullets are in full moult and have ceased laying, these old hens will continue laying until cold weather sets in, say November, and by this time the pullets should be laying again, and the new crop of spring pullets also. So that the old hens are not by any means entirely useless, if a continuous supply of eggs is wanted. And right here,

A MISTAKE

is often made by some in selling off hens as soon as they cease laying at this season. They are thus liable to sell or kill those that moult early and would be the winter layers. The hens that lay through the summer, that do not cease until well into the fall, will be idle and profitable in winter; and so this disregard of the periods of moulting of the hens is often the cause of a failure to procure eggs in the winter season when prices are high. The rule should be to sell or kill no early-moulting hens, but get rid of those that begin to moult as late as September, unless of special merit, and reserved for breeders or mothers.

At this period, also, it will be found advisable to provide something in the way of a tonic. A few drops of tincture of iron put in their water each day is a great help. Charcoal is also a good blood purifier and helps to keep the entire system in a good, healthy condition. A little judicious treatment of this kind not only benefits the health of the fowls but shortens the period of moulting, and in addition to that, the growth of plumage is stronger and heavier, and thus the fowls are better able to stand the cold weather of winter.



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. ETEL CO., QUINCY, ILL.

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.

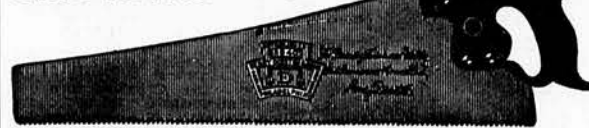
WHITMAN'S BALING PRESSES

VICTORIOUS IN EVERY CONTEST.



The largest and most complete line of Balers in America. Highest award at World's Fair, Chicago; Paris Exposition, and every other contest. Not the cheapest, but guaranteed THE BEST. See our "New Model Steel Beauty" and "Universal" Presses for this season. Also manufacture large line of strictly first-class Farm Machinery. Send for Catalogues and prices. WHITMAN AGRICULTURAL CO., St. Louis, Mo.

DISSTON'S



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.

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

The Captain's Economical Wife.

In a Massachusetts seaport town there is a retired sea captain who makes a frequent boast that he has the "smartest woman along shore." New instances of her enterprise are constantly coming to notice. The last one refers to an exploit by which she saved herself a doctor's bill. The captain tells the story with great relish.

"She's getting pretty heavy," he begins, "and now and again she'll miss her footing. Well, not many months ago she missed it on our stairs and fell all in a heap down three steps on to her side.

"When I got to her, she said, just as brisk as usual: 'Don't ask me if I've hurt myself, Cap'n, for of course I have. I reckon I've unjointed a bone in my left leg, falling on it. Now don't try to pull me up. Let me scramble round a minute, and you go for the doctor.'

"Well, the doctor's our next door neighbor, so it didn't take long to get him. He looked her over and said there was a bone somewhere round her left hip that was out of kilter.

"At that mother rose right up on her feet and toppled over the opposite way from what she'd fallen down stairs, and we heard a kind of a crack.

"She looked up at the doctor with her mouth kind of whitish, but the same old twinkle in her eyes, and she says: 'I believe I've set that bone myself, doctor,' and she had!"—Youth's Companion.

\$100 Reward \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer \$100 for any case that it fails to cure. Send for list of testimonials. Address F. J. CHENEY & CO., Toledo, O.

Sold by druggists, 75 cents.

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.



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.



We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. 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.

PORTABLE WELL DRILLING MACHINERY.

Established 1867. Covered by patents. Machines drill any depth both by steam and horse power. Twenty different styles. Send for free illustrated catalogue. Address, **KELLY & TANEYHILL, Waterloo, Iowa.**



Large inside burr revolves twice to sweep's one. Or—sweep's one length to sweep's one.

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.**

The Test of Time

is severe and infallible, and the verdict is always convincing. The

Perkins Wind Mills

have stood the test of time in wheel, rudder, regulator and all parts, they are strong, durable, efficient and easy working. Built in many sizes. Meet every requirement for every purpose. Catalogue sent free. **PERKINS WIND MILL CO., 31 Race St., NISHAWAKA, IND.**

Brass, Aluminum, Grey Iron Castings

Patterns, Models, Machine Work.

TOPEKA FOUNDRY,
TOPEKA, KAS.

WE SELL DIRECT TO THE FARMER AT ONE-HALF DEALERS' PRICES.



New Disc Harrow, Grain Drill and Broadcast Seeder.

Throwing the earth all one way. Revolutionizes the method of seeding, as the twine binder did the harvest. Discs 6 in. and 9 in. apart. Send for circular.

DEATH TO HIGH PRICES.

16-in. Sulky Plows, \$25. 16-in. S. B. Plows, \$9. Rolling Coulters, Extra \$1.50. 64-T. Lever Harrow, \$7.50. Mowers, \$29.40. Riding Gang Plows, \$35. 12-16 Disc Harrow, \$16. Hay Rakes, \$11.50. Wagons, Buggies, Harness, Sewing Machines, Cane and Older Mills, Hay Tools and 1000 other things at one-half dealers' prices. Catalogue free. Mapgood Plow Co., Box 2, Alton, Ill.

NOTICE—This ad. will appear until Aug. 18, '98.

\$18.00 and \$22.00

Wind Mills and Towers, Complete, Set Up

THE SHURTLEFF CO.,
MARLNGO, ILL.

THE Blower Wind Mill

For farmers who cannot afford one of the high-priced steel mills.

Pumps, Pipe, Cylinders and Screens.

Send for illustrated circulars and price list before buying.

THE SHURTLEFF CO., Maroon, Ill.

.. 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 references are 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 plan, 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 a 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 if 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 yourself 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 \$50,000.00 stock. You will have no competition. We buy our cloth direct from the largest European and American Mills. We control the product of several woolen 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 Pantaloonings, 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 their 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, deliver no goods, 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.

LIGHTNING HAY PRESS

STEEL



Special prices.

Kansas City Hay Press Co., 100 Mill St. Kansas City, Mo.

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BEST TRAINS

VESTIBULED "ELI" TO CHICAGO.
VESTIBULED LIMITED TO ST. LOUIS.



FREE CHAIR CARS, LATEST PATTERNS OF SLEEPERS.

W. WAKELEY, C. P. A., St. Louis, Mo. J. C. RAMMALL, T. P. A., St. Joseph, Mo.

ALFALFA SEED FOR FALL SOWING

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

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

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. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

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

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.

FOR SALE—Thirty-eight head two-year-old steers, good order and gentle, on feed and pasture. Price \$25.50. Call on or address W. H. Hamm, Preston, Kas.

160 ACRES of Western Kansas land to trade for full-blood Shropshire sheep, or grades. Address B. C. Lucky, Verdella, Mo.

FOR SALE AT HALF PRICE—To make room for young stock, eighteen B. F. R. hens and two cocks, seventeen Buff Leghorn hens and two cocks; part of the birds are scored. Mrs. E. E. Bernard, Dunlap, Kas.

FOR SALE OR EXCHANGE—Two incubators, new this spring; one Standard, 165 egg size, one No. 1, 200 egg size, both in good repair; will sell the Standard for \$10, No. 1 \$15, or will exchange for Brown or White Leghorn pullets. Mrs. E. E. Bernard & Son, Dunlap, Kas.

MEN WANTED—I want to employ two good men for my ranch at Arlora, Wyoming. Address me in care of Kansas Farmer Co., Topeka, Kas. I will be at Kansas Farmer office September 1. Edgar Boice.

WANTED—To buy a French Coach stallion. Box 14, Wilmet, Kas.

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

TWO YOUNG BULLS—By Duke of Kansas 123126, fit for fall service, for sale; one a roan, a Constance, and one red, an Imp. Golden Galaxy. C. E. Chambers, Mont Ida, Kas.

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

SHORT-HORNS FOR SALE—Forty-six cows and heifers, Crutcher, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Crutcher, 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.

SOWS FOR SALE—By all the great boars. Write for what you want. I will price right; going to sell. F. W. Baker, Council Grove, Kas.

CELERY PLANTS—White Plume. 25 cents per 100. \$2 per 1,000. J. H. Shaw, market gardener, Florence, Kas.

PIGS—Out of Victor Free Trade 3825, sired by Kievers First Model 18245, \$20. F. W. Baker, Council Grove, Kas.

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

ABERDEEN-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.

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

PIGS—Out of a Hadley Jr. sow and sired by Kievers First Model 18245 at \$20. F. W. Baker, Council Grove, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lary-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 Crutcher stock, at bedrock prices, either by carload or singly, time or cash. J. W. Troutman, Comiskey, Kas. (Northern Lyon county, Mo. Pacific R. R.)

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

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.

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.

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

FANCY BRED PIGS—Six by Hadley Jr. 18314, dam Kievers Model Tecumseh 4244. Price \$15. F. W. Baker, Council Grove, Kas.

FOR SALE—Hereford bull, Rock 2d 57420, also forty calves sired by same. E. W. Thoes, Alma, Kas.

LIVE STOCK AUCTIONEERS.

GEORGE W. BARNES, Auctioneer, Valencia, 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. Complete 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.

THE STRAY LIST.

FOR WEEK ENDING AUGUST 4, 1898.

Cherokee County—S. W. Swinney, Clerk.

HORSE—Taken up by John W. Carman, in Garden township, Cherokee county, July 12, 1898, one bay horse, 5 years old, left hind foot white, saddle marks, small scars on both front feet under fetlock, few white hairs in forehead, roached mane; valued at \$12.

MARE—Taken up by L. Mishler, in Spring Valley township, Cherokee county, July 15, 1898, one brown mare, 7 years old, 15½ hands high, shod all around, scar on right front foot, black mane and tail; valued at \$40.

FOR WEEK ENDING AUGUST 11, 1898.

Wyandotte County—Leonard Daniels, Clerk.

MARE—Taken up by William Barrett, whose residence is one and three-fourths miles west of Turner, in Shawnee township, Wyandotte county, July 14, 1898, one bright bay mare, 5 years old, 14½ hands high, black mane and tail, white spot in face, right hind foot white; valued at \$25.

MARE—Taken up by same, July 14, 1898, one dun-colored mare, 9 years old, 15 hands high, dark mane and tail, white spot in face, right hind foot white, splint on left front leg; valued at \$5.

Pottawatomie County—A. P. Scritchfield, Clerk.

MULE—Taken up by E. B. Sherman, April 14, 1898, whose residence is Lone Tree township, Pottawatomie county, one mouse-colored mare mule, 3 years old, mark in right ear, weight 650 pounds; valued at \$25.

Osage County—William H. Thomas, Clerk.

COW—Taken up by J. C. Lawson, whose residence is Quenemo, Agency township, Osage county, July 19, 1898, one red and white cow, 9 years old, ears cropped; valued at \$25.

HEIFER—Taken up by same, July 19, 1898, one white heifer, 3 years old, no marks or brands; valued at \$20.

Shawnee County—John M. Wright, Clerk.

MARE—Taken up by W. E. Corbett, Mission tp. (P. O. Seabrook), July 13, 1898, sorrel mare, 5 years old, five feet two inches high, star in forehead, right hind foot white, foretop clipped.

HORSE—Taken up by M. Cole, in Soldier township, June 27, 1898, one brown horse, 8 or 9 years old, white hind feet; valued at \$35.

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, blemish on right side; the two animals valued at \$30.

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. 1824, by Illinois No. 920 (5395).

WRITE FOR PARTICULARS.

Live Stock Artist.

F. D. TOMSON, 514 Monroe St., Topeka, Kas. Portraits of horses and cattle prepared for advertising purposes. Breeders' correspondence solicited.

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

20

BUSHEL 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.

J. G. Peppard

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

SEEDS

VERNON COUNTY HERD OF REGISTERED POLAND-CHINAS.

125 head in herd. Herd boars, King Hadley 16766 S. and Turley's Chief Tecumseh 2d 17978 S. Forty-six head of fall pigs that would be considered "the best" in any herd in United States. Write for particulars. Prices right and stock guaranteed. J. M. TURLEY, Stotesbury, 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 23441, Black Joe 23603, 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.

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 2 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 breed 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.**



SUNNY SLOPE
EMPORIA, KAS.
REGISTERED
HEREFORD
CATTLE.

ADDRESS ALL CORRESPONDENCE TO.....
C. S. CROSS, Emporia, Kansas.

THURSDAY, AUG. 25, 1898,

Elm Lawn Farm, Odessa, Mo.,

The Anderson's Model and Chief Tecumseh 2d
Litter Will Sell 4 Boars and 4 Sows.

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