

KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, JULY 25, 1901.

ESTABLISHED IN 1863
\$1.00 A YEAR.

Breeders' Directory

HORSES AND MULES.

PERCHERON HORSES

J. W. & J. C. ROBISON, Towanda, Kansas.
Importers and Breeders. Largest Herd in the State.
Inspection Invited.

PERCHERON HORSES and ABERDEEN-ANGUS CATTLE.

GARRETT HURST, Breeder, Zyba, Sumner Co. Kans. Young stock for sale of either sex. All registered.

HENRY AVERY & SON, BREEDERS OF

Pure Percherons.

The largest herd of Percheron horses in the west and the best bred herd in America. A choice collection of young stallions and mares always on hand. Prices consistent with quality. Address, or come and see at

Wakefield, Clay County, Kansas.

SWINE.

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

M. H. ALBERTY, - Cherokee, Kansas.

Duroc-Jerseys.

100 head for this year's trade; all eligible to record.

MAPLE AVENUE HERD J. U. HOWE, DUROC-JERSEYS. WICHITA, KANSAS.

Farm 2 miles west of city on Maple Ave.
V. B. Howey, Box 103, Topeka, Kans.
Breeder and shipper of Poland-China hogs, Jersey cattle, S. L. Wyandotte chickens. Eggs in season.

CEDAR SUMMIT POLAND-CHINA STOCK FARM.

Only choicest individuals reserved for breeding purposes. J. M. GILBERT, Busby, Elk County, Kans.
FAIRVIEW HERD DUROC-JERSEYS

Has 80 pigs of March, April, and May, 1901, farrow for this season's trade at reasonable prices.
J. B. DAVIS, Fairview, Kans.

PARKDALE STOCK AND FRUIT FARMS

THOROUGHbred HEREFORD CATTLE.
CHAS. A. SCHOLZ, Proprietor, - FRANKFORT, KANS.

POLAND-CHINAS. 90 GOOD spring pigs;

bred but they are CHOICE. Write for one. Don't delay.
DIETRICH & SPAULDING, Richmond, Kas.
Riverside Herd of Poland-China Swine.

Commodore Dewey No. 46187 head of herd, assisted by a grandson of Missouri's Black Chief. Young stock for sale reasonable. All stock recorded free.
M. O'BRIEN, Liberty, Kans.

CHERRY GROVE FARM DUROCS,

From best prize-winners. One spring boar, also fall and winter pigs for sale.
WARE & POCOKE, Station B, St. Joseph, Mo.

A FEW POLAND-CHINA PIGS FOR SALE.

Fine individuals. "Chief I Know" and "Look Me Over" strains. R. J. Conneway, Edna, Kans.

D. L. BUTON, North Topeka, Kans., Breeder of Improved Chester Whites.

Stock For Sale.
Farm is two miles northwest of Reform School.

T. A. HUBBARD,

ROME, KANS., Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES.

Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

High-Class Poland-China Hogs

Jno. D. Marshall, Walton, Harvey Co., Kans.,
Breeds large-sized and growthy hogs with good bone and fine finish and style. FOR SALE—Thirty October and November gilts and 15 boars, also 100 spring pigs, sired by Miles Look Me Over 18879. Prices right. Inspection and correspondence invited.

SWINE.

Registered Stock, DUROC-JERSEYS, contains breeders of the leading strains.
N. B. SAWYER, - Cherryvale, Kansas.

GRANGER HERD.

Established 25 years. Over 2000 shipped. Four crosses. World's Fair, 4 highest priced strains of Poland-Chinas. Send stamp. W. S. Hanna, Richter Kans.

DUROC-JERSEY SWINE—REGISTERED.

Write for prices on choice spring pigs; 100 to select from. Third annual sale date, October 7.
NEWTON BROTHERS, Whiting, Kansas.

KANSAS HERD OF POLAND-CHINAS has some extra fine spring gilts, some January gilts, and sows 18 months, bred to Sen. I Know, by Perfect I Know; and some nice fall boars by Sen. I Know and U. S. Tec. Address F. P. MAGUIRE, Haven, Reno Co., Kans.

Mound Valley Herd of POLAND-CHINAS

Has some show gilts bred to I. B. Perfection (25172 S.). Others bred to Black U. S. Best (21767). Also a fine lot fall pigs for sale. Prices reasonable.
W. P. WIMMER & SON, Mound Valley, Kans.

SUNNYSIDE HERD OF PEDIGREED POLAND-CHINA HOGS.

We now have for sale some extra good young boars, and a lot of gilts 8 to 10 months old. All good. Gilts will be bred or sold open as desired. This is a choice lot of young stuff that will be priced cheap, quality considered.
M. L. SOMERS, Altoona, Kans.

STANDARD HERD OF Registered Duroc-Jerseys

PETER BLOCHER, Richland, Shawnee Co., Kans.
Herd headed by Big Joe '963, and others. A few male pigs of March and April farrow. S. C. B. Leghorn eggs.

Ridgeview Farm Herd of Large English Berkshires

Four boars December farrow, and two November farrow, for sale. No gilts old enough to breed. Spring pigs quoted also.
MANWARING BROS., Lawrence, Kans.

Verdigris Valley Herd POLAND-CHINAS.

Large-boned, Prize-winning. We have for sale 80 head of fall pigs—the best grown out lot we ever raised. We can furnish herds not akin of any of the fashionable strains. We have several that are good enough to fit for next fall's shows. Prices reasonable. Nothing but good ones shipped on orders.
WAIT & EAST, Altoona, Kans.

R. S. Cook, Wichita, Kansas, BREEDER OF POLAND-CHINA SWINE.

The prize-winning herd of the Great West. Seven prizes at the World's Fair. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 2841, Black Joe 2868, 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.

THOROUGHbred POLAND-CHINA HOGS

I have for sale a few October boars and gilts, 4 bred sows, and 70 winter and spring pigs, good head and ears, large boned. Come and see them, or write me.
JOHN BOLLIN, Kickapoo, Leavenworth Co., Kans. (Express Office, Leavenworth.)

CATTLE.

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.

MEADOW BROOK SHORTHORNS—Ten fine young bulls for sale—all red. Red Laird, out of Laird of Linwood, at head of herd.
F. C. KINGSLEY, Dover, Shawnee Co., Kans.

Breed the Horns off by using a RED POLLED BULL.

CHAS. FOSTER & SON, FOSTER, Butler Co. Mo. Breeders of Red Polled Cattle, Herd Headed by Powerful 4582. Pure-bred and grades for sale. Also prize-winning Light Brahmas.

CATTLE.

Norwood Shorthorns. V. R. ELLIS Gardner, Kans.

Sir Charming 4th at head of herd. Cruickshank top crosses on best American families. Young stock for sale.

HEREFORD BULLS FOR SALE.

Five registered bulls, choicely bred, their sires being Lincoln 47095 by the great Beau Real and Klondike 72001 by the Beau Brummel bull, Senator. Their dams are daughters of Stonemason, Star Grove 1st, and Lincoln. I will price them very low to an early inquirer.
Address ALBERT DILLON, Hope, Kans.

SHORTHORN BULLS FOR SALE

A few choicely bred young bulls, spring yearlings, for sale at very reasonable prices. Also 2 Shropshire and 1 cross-bred Shropshire-Cotswold buck. Address JAMES C. STONE, Leavenworth, Kans.

POLLED DURHAMS! THIS LITTLE AD.

will direct you to the largest as well as the best Scotch bred Polled Durham herd of cattle in the United States. 150 Fine Duroc-Jersey Pigs.
F. F. FAILOR, Newton, Iowa.

ALFALFA MEADOW STOCK FARM

1,300 acres. Pure-bred stock only. Herefords, Poland-Chinas, Light Brahmas and Belgian hares. Stock of all kinds for sale. Pedigreed hares, 42.
O. B. WHITAKER, Proprietor, Shady Bend, Kansas.

Maple Leaf Herd of Thoroughbred SHORTHORN CATTLE

And POLAND CHINA SWINE. Farm is 2 miles south of Rock Island depot.
JAMES A. WATKINS, Whiting, Kans.

REGISTERED HEREFORDS.

THOS. EVANS, BREEDER, Hartford, Lyon County, - Kansas. -SPECIAL OFFERINGS-
FOR SALE—Four yearling bulls, one imported 4-year-old bull, a few young cows and heifers.

D. P. NORTON'S SHORTHORNS,

Dunlap, Morris Co., Kansas. Breeder of PURE-BRED SHORT-HORN CATTLE, Herd Bull, Imported British Lion, 133692.
YOUNG - STOCK - FOR - SALE.

125 RAVENSWOOD SHORTHORNS,

C. E. LEONARD, BELLAIR, MO. Males and females for sale. Inspection especially invited. Lavender Viscount 124755, the champion bull of the National Show at Kansas City, heads the herd.
ED. PATTERSON, Manager. Railroad and Telephone station, Bunceton, Mo.

H. N. Holdeman, Girard, Crawford Co., Kans.

BREEDER OF PERCHERON HORSES And HOLSTEIN FRIESIAN CATTLE. Representing Josephine, Mechthilde and Parthena families. Poland-China hogs. Son of Missouri's Black Chief at head of herd. B. F. R. and B. L. H. chickens. Eggs in season, always guaranteed as represented.

Silver Creek Herd SHORTHORN CATTLE.

GWENDOLINE'S PRINCE 180918 in service, a son of the \$1,100 cow Gwendoline 5th. Best Scotch, Bates and American families represented. Also bred High Class Duroc-Jersey Swine.
Can ship on Santa Fe, Frisco and Missouri Pacific railroads.
J. F. STODDER, Burden, Cowley Co., Kans.

H. M. SATZLER, Burlingame, Kansas, BREEDER OF HEREFORD CATTLE, BERKSHIRE SWINE, COTSWOLD SHEEP, STOCK FOR SALE.

CATTLE.

A. D. SEARS & BROS., - Leon, Iowa. SHORTHORNS.

2d Grand Duke of Hazelhurst 150091 heads the herd.
E. S. COWEE, Eskridge, Kans., R. R. 2, Breeder of PURE-BRED HEREFORD CATTLE
Kids' Duxx 96637 at head of herd. Young bulls and heifers for sale.

SYCAMORE SPRINGS STOCK FARM SHORTHORNS.

H. M. Hill, Prop., La Fontaine, Kans. No Shorthorns for sale at present, but will have a few young things in the spring. Personal inspection of our herd invited.
CORRESPONDENCE SOLICITED.

ALLENDALE HERD OF Aberdeen-Angus Cattle

The Oldest and Largest in the United States
Splendid recently imported bulls at head of herd. Registered animals on hand for sale at reasonable prices at all times. Inspect herd at Allendale, near Iola and La Harpe, Allen Co., Kans., and address Theo. S. Anderson, Manager, there; or
ANDERSON & FINDLAY, Prop's, Lake Forest, Ill.

BLACK DIAMOND STOCK FARM

Has for Sale a Few CHOICE GALLOWAY BULLS, Sired by a World's Fair winner. Also a few English Fox Terrier pups of finest quality.
FOR SALE OR TRADE—A 15-acre suburban property in Des Moines, Iowa. Information promptly furnished by the owner.

J. R. HIGGINS, Keswick, Keokuk Co., Iowa

MT. PLEASANT HERD OF SHORTHORNS.

Herd headed by Acomb Duke 18th 142177. Herd composed of Young Marys, Galateas and Sanaparells. Young bulls for sale.
A. M. ASHCRAFT, Atchison, Kans. Inquire at R. F. D. No. 3, Ashcraft & Sage Livery Barn, Main Street.

CLOVER CLIFF FARM REGISTERED GALLOWAY CATTLE.

Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion Habbo, and the Saddle stallion Rosewood, a 16-hand 1,100-pound son of Montrose in service. Visitors always welcome.
Address BLACKSHERE BROTHERS, Elmdale, Chase Co., Kans.

SUNFLOWER HERD SCOTCH AND SCOTCH-TOPPED SHORTHORN CATTLE, POLAND-CHINA SWINE

Herd Bull, Sir Knight 124403. Herd Boars, Black U. S. 2d 25582 S, and Sunflower Black Chief 25603. Representative stock for sale.
ADDRESS ANDREW PRINGLE, Rural Route 2, Eskridge, Kans.

ROCKY HILL SHORTHORNS

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

20-Bred Cows and Heifers-20

Because of shortage of feed, we now offer for sale, cows that before we have refused to price. Cows safe in calf to, and calves by, the grand Waterloo Duke of Hazelhurst 11th 130723; also cows bred to the Cruickshank bulls, Sempstress Valentine, and Mayor, now in service.

RIVERSIDE STOCK FARM.

O. L. THISLER, Chapman, Dickinson Co., Kans., Importer and Breeder of *Percheron, and French Coach Horses, and Shorthorn Cattle.*
 For Sale—A few Shorthorn heifers, and Percheron stallions; also a Special Bargain on 9 Registered Hereford Bulls, 2 years old, and a few Full-blood Percheron Mares.

Draft Stallions OF THE SHIRE, CLYDE, AND.... PERCHERON BREEDS.

Imported, and Home Bred. All Ages.
 POLLED DURHAM AND SHORTHORN CATTLE. POLAND-CHINA HOGS. Prices Right
 Snyder Brothers, - - Winfield, Kansas.



AMERICA'S LEADING HORSE IMPORTERS!

EVERY FIRST PRIZE: except one, at the Universal Exposition, Paris in 1900.
 NINETEEN MEDALS at the Great Percheron Show at Nogent-le-Rotrou in 1901.
 THIRTY-FIVE MEDALS at the Great Annual Show of France at Nantes and other shows throughout the Draft Horse Breeding Districts of that country.
 THE LARGEST SINGLE IMPORTATION ever made by ANY FIRM now in business just received at our stables.
McLAUGHLIN BROTHERS,
 SIXTH AND WESLEY AVES., COLUMBUS, OHIO.

...GREAT AUCTION SALE OF...

PRIZE BERKSHIRES

Fitted for the Grand State Fair Circuit, and the Great Berkshire Show, To be held at **KANSAS CITY, MO., NEXT OCTOBER.**
 Attend this Sale of Prize-winners to be held at the New Kansas City Stock Yards Sale Pavilion, **KANSAS CITY, MO., on**

THURSDAY, AUGUST FIRST, 1901,
 Commencing Promptly at 1 P. M., under the management of *The American Berkshire Association,* when

50--HEAD OF BERKSHIRES OF SHOW QUALITY--50
Will Be Sold to the Highest Bidder For Cash.

Only Strictly First Class Show Animals have been pledged to this sale, and the high character of the consignors is ample guarantee that, in point of extra quality and choice breeding, the Berkshires sold will be the Tops of the best herds, and fitted up in the best condition for exhibition. All who want Berkshires that are fitted to win at the Fall Fairs are cordially invited to attend this sale and secure the best bargains that will be offered this season.
 The Association assures you of a square sale, first-class stock, and that the highest bona-fide bid will buy the hogs. The bids you send by mail will, as heretofore, be handled entirely in the interest of the sender, who will be treated as fairly as if he was present in person to make his own purchases. If you cannot attend this sale send bids by mail to the Clerk, **CHARLES F. MILLS,** Secretary American Berkshire Association. For Catalogue, address **CHARLES F. MILLS,** Springfield, Ill
 AUCTIONEER—**COL. JAMES W. SPARKS,** MARSHALL, MO.

GALLOWAYS.

Largest Herd of Registered Galloways in Kansas.

Young bulls, cows, and heifers for sale.

E. W. Thrall, Eureka, Kansas

50 Shorthorn Bulls For Sale.

The Bill Brook Herd of Registered Shorthorns

Have on hand for ready sale, 50 Young Bulls, from 6 to 20 months old; also a few good heifers.
 Address.. **H. O. Tudor, Holton; Kans.**

A Sure Preventive of Blackleg

Is Parke, Davis & Company's Blackleg Vaccine Improved.
 Ready for Immediate Use. No Expensive Outfit Needed.

All you have to do is to put the Vaccine in your syringe, add boiled water according to directions, and inject into your cattle. It will positively PROTECT your cattle from the dread disease, Blackleg, the same as vaccination prevents Smallpox in the human family. Specify Parke, Davis & Co.'s Blackleg Vaccine Improved, and get the kind that is sure to be reliable. EVERY LOT IS TESTED ON CATTLE BEFORE IT LEAVES OUR LABORATORIES. Write for Literature and Full Information, Free on Request. FOR SALE BY ALL DRUGGISTS.

PARKE, DAVIS & COMPANY, Detroit, Michigan.

Branches: New York City, Kansas City, Baltimore, New Orleans, Chicago, Walkerville, Ont., Montreal, Que., and London, England.

"BLACKLEGINE"

Pasteur Blackleg Vaccine, single treatment, ready for use.

No mixing, filtering, or injecting. Applied with a needle, furnished free.

PASTEUR VACCINE CO., - - - Chicago.
 BRANCH OFFICE: 408 Hall Bldg., Kansas City, Mo.



STEELE BROS., Belvoir, Douglas Co., Kansas.

Breeders of SELECT

HEREFORD CATTLE.

Young Stock For Sale Inspection or Correspondence Invited

SCOTT & MARCH,

BREEDERS OF PURE BRED

HEREFORDS,

BELTON, CASS COUNTY, MO.

BULLS in service, HESIOD 29th 66304, Imp. RODERICK 80155, MONITOR 58275, EXPANSION 93863, FRISCOE 93874, FULTON ADAMS 11th 83731. HESIOD 29th 66304
 Twenty-five miles south of Kansas City on Frisco, Fort Scott & Memphis, and K. C., P. & G. Railroad

Sunny Slope Herefords

...290 HEAD FOR SALE...

Consisting of 200 bulls, from 8 months to 4 years old, and 90 yearling heifers. I will make very low prices on bulls, as I desire to sell all of them before May 1. Write me, or come at once if you want a bargain.

C. A. STANNARD, Emporia, Kansas.



GUDGELL & SIMPSON,
 INDEPENDENCE, MO.,

BREEDERS AND IMPORTERS OF

Herefords

One of the Oldest and Largest Herds in America.

ANXIETY 4th Blood and Type Prevail.

BOTH SEXES, IN LARGE OR SMALL LOTS ALWAYS FOR SALE



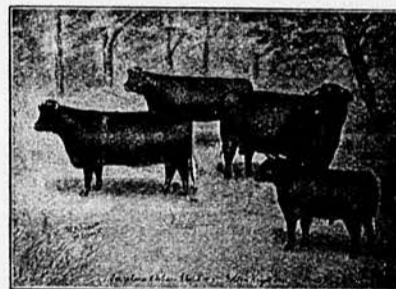
T. K. Tomson & Sons,

* * Proprietors of * *

Elderlawn Herd of Shorthorns.

DOVER, SHAWNEE COUNTY, KANSAS.

GALLANT KNIGHT 124468 in service. How would you like a cow in calf to, or a bull sired by Gallant Knight 124468? His get won 14 prizes at the National Cattle Show held at Kansas City last October. 100 head in herd. Correspondence and inspection invited.



PEARL SHORTHORNS

HERD BULLS:

BARON URY 2d 124970. LAFITTE 119915.

Inspection Invited

C. W. TAYLOR, Pearl, Kans

Tebo Lawn Herd of Shorthorns.

—HERD BULLS ARE—

IMPORTED COLLYNIE 135022 bred by Wm. Duthie.
 IMPORTED BLYTHE VICTOR 140609 bred by W. S. Marr.
 IMPORTED BAPTON MARQUIS bred by J. Deane Willis.
 ADMIRAL GODOY 133872 bred by Chas. E. Leonard.

FEMALES are the best QUICKSHANK families topped from the leading importations and American herds. These added to the long established herd of the "Casey Mixture," of my own breeding, and distinguished for individual merit, constitute a breeding herd to which we are pleased to invite the attention of the public. Inspection and correspondence solicited. Address all correspondence to manager.

E. M. Williams,
 Manager.

G. M. CASEY, Owner,
 Shawnee Mound, Henry County, Mo.

VALLEY GROVE SHORTHORNS

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, Proprietor, Dover, Shawnee Co., Kans**

The Stock Interest.

THOROUGHbred STOCK SALES.

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

October 7, 1901—Newton Bros., Duroc-Jersey swine, Whiting, Kans.
 October 8-10, 1901—American Berkshire Association Sale at Kansas City.
 November 21, 1901—Ernst Bros., Shorthorns, Tecumseh, Neb.
 November 20-22, 1901—National Hereford Exchange, E. St. Louis, Ill. (Sotham management.)
 December 10, 11 and 12, 1901—Armour-Funkhouser, Herefords, Kansas City.
 December 18, 1901—H. C. Duncan, Shorthorns, Kansas City.
 January 28 to 31, 1902, for Sotham's Annual Criterion Sale, at Kansas City.
 February 25-27, 1902—C. C. Stannard and others, at Kansas City, Mo., 200 Hereford.
 March 25-27, 1902—National Hereford Exchange, Chicago, Ill. (Sotham management.)
 April 22-24, 1902—National Hereford Exchange, Kansas City, Mo. (Sotham management.)
 May 27-29, 1902—National Hereford Exchange, Omaha, Nebr. (Sotham management.)
 June 24-26, 1902—National Hereford Exchange, Chicago, Ill. (Sotham management.)

Protecting Hogs Against Disease.

H. S. MOORE BEFORE IOWA SWINE BREEDERS.

By invitation from one of your fellow members it affords me a pleasure abounding with heartfelt thanks and gratitude for this privilege of addressing you on a subject that is uppermost and paramount at this time, and I shall, in the time allotted to me, endeavor by actual experience and various tests to demonstrate to your wise and searching judgment the merit of our plan. The suggestions I offer and advocate will, I hope, meet in part if not fully the approval of this body.

I did not come here to offer, bargain, or sell hog remedies, cholera cures, sure cures, nor take your valuable time in attempting to force upon you or inflict a theory that we have not put in practice. Invariably satisfaction has been obtained, at the smallest possible cost and in the shortest space of time, and my statements will be borne out by men who follow our plan. Some of our patrons, I am glad to know, are active members of this association and in this audience.

First. What is the proper, common sense plan of protecting your hogs from disease—call it what you may, cholera, swine plague, fever or anything you may? We answer, by dipping and feeding a remedy, or preparation, that puts and keeps the hog in such condition, both externally and internally, that he is proof against these germs.

Second. Why do we advocate dipping? The hog is of a constitution entirely of a spongy or porous nature. We dip, and this solution penetrates every pore, killing every germ whether it be fever or otherwise, ridding the hog of all lice and mange; he is put in perfect condition externally, and by feeding the same remedy internally you free him of all worms such as the gaul worm, gut worm, blood worm, and lastly the kidney worm which is the most destructive of all. A trial will convince thousands, and a trial will convince that ours is the only practical plan. To properly protect your hogs, where and when to begin: Begin now, or as soon as you can establish a dipping plant on your farm. Dip and feed the sow with the remedy as directed. Dip all pigs as soon as they are two weeks old, and dip every pig and hog on your farm once a month.

Begin a month before sows farrow to slop, using following composition: Scalded or ground oats, wheat bran, ground wheat and a little oat meal, continuing this until pigs are weaned, and feed the same to the pigs until they weigh from fifty to seventy pounds. Then you may put them on corn or behind cattle in feed lots and you have your hog ready for market, when he is six or seven months old at smallest possible cost. Hogs should have plenty of range and wherever possible they should be changed from one field or lot to another. They should have grass or Alfalfa in summer, oats and rye to graze on in winter, but this is not always possible. Build your hog houses at least twelve or fifteen feet high and

let the sun shine in. Better that a hog live in mud than in dust. Dust is a fast developer of disease germs. Discard all wood or plank floors. They were never intended for the hog. Make hog floors of broken rock, coarse gravel and cement and keep the same clean and disinfected with our remedy. If you want the best brood sow never breed a gilt until she is twelve months old, and never allow her to get too fleshy, but feed such foods as will develop bone and muscle, capacity and constitution rather than flesh. I warn you against pouring or feeding all kinds of truck and nostrums that are advocated for the hog. These poisons, often being taken into the system, must pass off either by natural discharge or through the pores. Mix lime, salt and salt petre and put in your hog lots and you will never ring a hog as long as you have a supply of this. Do not be carried away by theory or uncertainties, but understand you can not change nature's laws any more than you can change the sun's course, but you can assist nature and when you do this intelligently, nature re-asserts herself and thereby you have accomplished the end sought.

Mr. Lambing—Mr. Chairman, I will say that I invited Mr. Moore to come up here. I took the responsibility as a member of this association, and told him that we had been horribly bored by hog doctors, particularly those that had a sure cure for cholera, and the members of the Iowa Swine Breeders' Association were not open for a tirade or talk on that line. And, knowing he was not prepared to give them a talk on that line and that he had a common sense method of ridding hogs of lice and vermin of every description, I took the liberty of inviting him up here, and told him that I thought he would be well received by the breeders here. I said: "I am not asking you up for your benefit; I am asking you up for what I believe is the benefit of every swine breeder of all breeds of swine; I firmly believe that. I have had my hogs afflicted with lice and mange ever since the first hogs I got from the east. I got plenty of lice from Ohio, and have never been able to rid the herd of them until recently. A year ago in March I got one of the dipping tanks from Mr. Moore, and ten gallons of dip. With a gallon of dip we put in about 40 gallons of water; we fix a narrow chute and drive the hogs through the dip. You can drive 500 head through in a day, and it costs nothing as compared to the good it does. Now I will say that I did not follow it according to directions; I could not get my men to do it they would not dip as often as I wanted them to. But we have succeeded in keeping the hogs entirely free from lice and mange and everything of that kind. We had a bunch of fall pigs that we could not get to do anything at all; they were lousy and full of mange, and we dipped them three times and I never saw a greater development of gain on any bunch of hogs in my life. We continued to give them the same identical amount of feed we had prior to the time they were dipped, and after they were dipped they made a grand gain. Their skins cleaned off, and their hair assumed a glossy appearance and they did well. We never tried feeding it for disease, although I know men who have fed it and said it gave good results, though I am a little bit skeptical on that point. But as a lice killer and worm destroyer and mange destroyer I never saw its equal. I was at Mr. McTavish's place a couple of weeks ago, and I was surprised. I did not know he had one of the tanks, but I noticed his hogs had a glossy appearance and their skins were fine and I could not find a louse on them. I asked him what he did to keep the lice down, and he said "I have a dipping tank," and we went up and saw it, and I then saw it was the same thing I had been using. I asked what kind of dip he had been using and he said, "The same I got with the tank, Moore's dip." He can tell you the result.

Mr. McTavish—I am not in the habit of advertising quack nostrums or hog remedies. It is nothing to me, individually, one way or the other, any more than if I can find anything good I like to benefit my fellow breeders by passing it around. I paid Mr. Moore the full price for everything I ever got of him, and always expect to, but this dip that he has is really a good thing. I have tried some other remedies, and they were all right for a short time; you think you are rid of the trouble and the first thing you know you have got it again, but after I put in my tank—it takes us a half day to run every hog on the place through there—I got my hogs free from lice, and I have the finest lot of pigs, and my hogs are in the finest condition that I ever had hogs, and I lay it wholly

to the use of that dip. I have not fed any of it. I would suggest a little improvement, though, in getting the hogs into the vat. In the directions Mr. Moore sends out he has a chute that lifts up about three feet at the elevation and then drops down to that tank, and it has sides on there. I have found it necessary to extend those sides along the side of the vat above two-thirds of the way tight, and then put a twenty-inch board, twenty inches wide, back where your chute begins that incline, and wire it on that cross piece about half way in the tank, and then your hogs are bound to go in there. We have had some large Berkshire sows that jumped clear over that tank. They actually would not any more than get their hind feet wet in the water. I had to devise some means to keep those sows down, and I think, too, it would be well to follow it up in ten days three times instead of twice. In the directions Mr. Moore says dip them, and then in ten days dip them again. That will kill all the lice that are on the hog. You will not be able after putting those hogs through there the second time to find a live louse on them. But they get back in the bedding and there will be a few in spite of you that will be left in the bedding in some way unless you clean up very thoroughly and use disinfectant in the nests. And if you run them through the next ten days you will wipe them out entirely. That has been my experience.

Mr. Hester—How about the lice inside of the hog's ear. Will this destroy them?

Mr. Lambing—Yes, sir.
 Mr. Hester—I would like to know the difference between this and the Zenoleum.

Mr. McTavish—I do not know the difference, I have not analyzed either one of them.

Skim-Milk Calves in the Feed Lot.

PRESS BULLETIN NO. 95, KANSAS EXPERIMENT STATION.

Feeders find that the average skim-milk calf does not make profitable gains in the feed lot and will not buy him. Farmers find that the difference in price between the ordinary skim-milk calf and one that has run with the cow is frequently greater than the profits made from milking, and they drop dairy work.

The Kansas Experiment Station during the past winter fattened 130 head of calves for baby beef. These were divided into nine lots—one lot of ten had been raised by hand with skim-milk, and another lot of ten had run with their dams in small pastures until weaning. Both lots were put in fattening yards at weaning and were fed for seven months on alfalfa hay and corn. The results are as follows:

	Average gain per head.		Feed for 100 pounds gain.	
	Lbs.	Corn.	Alfalfa	
Calves raised with dam.....	435	475	473	
Skim-milk calves.....	440	439	435	

Corn cost 40 cents a bushel and alfalfa hay \$8 a ton, making the cost of each 100 pounds of gain \$5.28 for calves raised with their dams and \$4.88 for the skim-milk calves. The calves when fattened were shipped to Kansas City, the steers in each lot bringing \$5.40 per hundred and the heifers \$5.15. The packers paid the same price for the fattened skim-milk calves that they did for the others. In this trial, the skim-milk calves made the greater gains, gains at the least cost, and made the most profit.

We attribute the good showing made by the skim-milk calves to the fact that at weaning time they were already on grain feed, they did not worry at loss of their dams as did the other calves, and they were perfectly tame.

The skim-milk calves were fed until weaning on sterilized skim-milk with a grain ration composed of equal parts of corn and Kaffir-corn, with all the alfalfa

Neuralgia

Every piercing, cutting, tearing, burning pain of this dreadful disease is a call for help. The tortured nerves are over-worked and worn out. They are weak, hungry, worried and exhausted nerves, and they take this way of making known their urgent need of rest and recuperation. Heed this cry of distress.

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 DEAR SIR:—I have given your Balmoline a thorough trial in our stables for the last three years, and find it the most SUCCESSFUL cure for horses and cattle in the shape of a salve I have ever tried. It is especially adapted to healing scalded shoulders of horses. I have also used it for sore teated cows, and find it splendid. I can highly recommend your Balmoline to all stock men. We use so much that I buy it in large quantities and think there is nothing like it for healing sores on stock.
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 Branch Office: 408 Hall Building, Kansas City, Mo.

hay they would eat. They were fed in this way twenty-two weeks and made an average daily gain of one and a half pounds per calf. The feed to raise these calves to weaning cost \$5.27 per head. As the results show, they were in good condition for feeding when weaned and the experiment shows strongly the good feeding qualities of the skim-milk calf and the profits that can be made from it, when the calf is properly handled from birth to weaning and then pushed for baby beef.

The college herd of scrub cows, bought without regard to their value for the dairy, produced in a year, at creamery prices, milk worth \$37.75 per cow. The skim-milk calves which were fattened in this experiment were of mixed breeding and were selected without regard to their value for the production of baby beef. They brought an average of \$40 each when marketed at about a year old. This shows a gross income in a year from a scrub cow and a scrub calf of \$77.75, when both cow and calf are pushed, the cow's milk sold, and the calf raised on skim-milk.

The best cow in the scrub herd produced milk in a year worth, at creamery prices, \$60.88. The best calf in the skim-milk lot brought \$47. This shows that a good scrub cow with a good calf could be made to bring over \$100 gross income in a year. With large grade Shorthorn or Hereford cows of the dairy type crossed with a short-legged, thick-meated, block bull, the returns from both cow and calf would undoubtedly be much greater, making the combination of dairy and baby beef very profitable. H. M. COTTRELL.

Breeding for Mutton and Lambs.

For several years the Wisconsin experiment station has been working in the direction of establishing a flock of mutton sheep, in which the lambs for an early spring market should be of the best, as well as the older sheep valuable for mutton. As a result of their investigations so far they say that one chief consideration is to secure good rams. This does not mean high-priced prize winners, as they almost invariably prove infertile or incapable of service. When rams are vigorous, without having been pampered or starved, and show that they have the qualities desired, they will give good value received, even at high prices. The ewes should be selected from those that are the deepest milkers, that suckle their lambs the best, and that have dense fleeces for their own protection. The best mothers are invariably among the leans when the lambs are weaned, and they should be chosen by the record they have made as mothers, and not on points of style or smoothness. They are apt to vary in quality of lambs raised from year to year, and it is not always wise to reject a ewe because of poor lambs one year, if she has good records for previous years, or a ewe the first year if she is known to be of a good-milking family and appears all right. The ewe lambs to be kept for breeding should be fed liberally from the first with oats and the best pasturage. This course insures good weight of body and fleece, and after the first year it is hardly possible to check their growth, as they will have the necessary vigor to provide for themselves. In a grade flock where lambs are to be sold to the butcher uniformity is important, and a ram that has proven a good breeder should be bred to the same ewes year after year as long as possible, but when necessary to change, get one that has not the same faults of fleece or form as the ewes, or has good qualities which they lack. If the ewes are uniform this is easier than when they are a flock of mixed character.—Wisconsin Experiment Station Reporter.

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These cars are run on the Union Pacific daily from Nebraska and Kansas points, and are fitted up complete with mattresses, curtains, blankets, pillows, etc., requiring nothing to be furnished by the passengers. Uniformed porters in charge of the cars, are required to keep them in good order, and look after the wants and comforts of all passengers. The cars are new, of modern pattern, and are almost as convenient and comfortable as first-class Palace Sleepers.

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Agricultural Matters.

The Farmers' Interest in Foreign Crop Reports.

Every country which issues crop reports naturally deals chiefly with those crops which are of the greatest economic importance to itself. The interest, therefore, of the farmers of any one country in the crop report of other countries is not necessarily directed to crops which are of the greatest value to them at home.

In the United States corn is always first of the domestic crops in total value. From 1879 to 1900 its total annual value, based on the farm price, December 1 of each year, has ranged between about \$500,000,000 and \$750,000,000, once only having fallen below the smaller amount, while five times it has exceeded the larger. The second place has been usually held by hay, the total annual value of the crop since 1897 ranging between \$330,000,000 and \$494,000,000, with a single exception in 1893, when it attained to upwards of \$570,000,000. The total annual value of the wheat crop since 1879 has ranged from \$213,000,000 to \$497,000,000, surpassing the hay crop in value only during the years from 1897 to 1882 and again in 1891 and 1897, when failures in the European wheat supply brought the price of that cereal for a time to an extraordinarily high level. Cotton in some years contends for the ascendancy with wheat, having exceeded the latter staple in total value ten years out of thirty-five, to-wit, in 1869, 1870, 1872, 1887, 1889, 1890, 1893, 1894, 1895, and 1900. The three years 1893, 1894, and 1895 will be remembered as a period of exceptional depression in wheat prices, and 1900 as a year of remarkably high prices for cotton. The total annual value of the cotton crop since 1879 has ranged from \$242,000,000 to \$339,000,000, the low value occurring in 1879 and the high in 1900.

Our four most valuable crops are those named (oats never rising or falling from the fifth place, or potatoes from the sixth); in their order of total value corn and hay in general coming first, wheat and cotton afterward. But when we come to consider their importance in international commerce, the order of these staples is very different. Cotton, our fourth crop, rises to the first place with a total average export value of \$221,000,000 for the five years from June 30, 1895, to June 30, 1900. Wheat follows, with an average export value, for the same years counting grain and flour together, of \$148,000,000. Corn and corn-meal sink from first place to third, their average export value, \$66,000,000, being not quite one-half that of wheat, and over one-fifth that of cotton. Hay, second in value produced, is altogether insignificant in value exported, which rarely much exceeds or falls below \$1,000,000 per annum. It is plain that the United States farmer has very little interest in the hay crop of other countries where he neither sells nor buys hay.

Our export of corn and corn-meal, small as it is by comparison with the total product of the country, is still by no means insignificant, while the rapid increase in the amount within the last few years raises hopes that a yet larger place is destined for America's leading grain in the world's markets. But the production of this country so far surpasses that of the world outside—for of the world's maize crop, year by year, not far from 75 per cent is credited to the United States—that it is hardly worth while to take account of what is grown in other countries for its bearing on demand and on price. In fact, except when a failure of the wheat harvest in Europe causes an unusual demand for breadstuffs, or when a commercial depression lowers prices of all commodities, the value of a bushel of corn is regulated by the number of bushels produced in the United States, falling as that number rises and rising as it falls. Similarly with cotton, of which staple this country produces also more than all the rest of the world together; 59 per cent against 41 in 1892. But there is no such close correspondence in the case of wheat, of which grain this country furnishes only from 16 to 27 per cent of the world's product.

The following table will illustrate these points. The first column gives the crop year, the second the country's production of corn in millions of bushels, the third the farm price as reported in December of the year named, the fourth and fifth similar particulars for wheat, and the sixth and seventh the cotton crop as estimated by the Department of Agriculture and the yearly average prices of low middling uplands

in the New York markets. A star (*) affixed to the price denotes a change in the same direction as in the production, the change in other cases being opposite:

Production and prices of three agricultural staples since 1883.

Crop Year.	Indian corn.		Wheat.		Cotton.	
	Pro-duced in U. S.	Price per bush-el.	Pro-duced in U. S.	Price per bush-el.	Pro-duced in U. S.	Aver. price per lb in New York.
	Mill- ton bushl's	Cents.	Mill- ton bushl's	Cents.	Thou- sand bales.	Cents.
1883.....	1,551	42.4	421	91.1	5,701	10 5-8
1884.....	1,796	35.7	513	64.5	*5,682	10 5-16
1885.....	1,936	32.8	357	67.1	6,575	9
1886.....	1,665	36.6	457	68.7	6,254	9 1/2
1887.....	1,456	44.4	456	*68.1	*7,020	9 13-16
1888.....	1,988	34.1	416	92.6	6,941	10
1889.....	2,113	28.3	491	69.8	*7,473	10 1-16
1890.....	1,490	50.6	399	83.8	8,653	8 5-8
1891.....	2,060	40.6	612	*83.9	9,035	7 1/2
1892.....	1,628	*39.4	516	*62.4	6,700	8
1893.....	1,619	*36.5	396	*53.8	7,493	7 1/2
1894.....	1,213	45.7	460	49.1	9,476	6
1895.....	2,151	25.3	467	*50.9	7,161	7 1/2
1896.....	2,284	21.5	428	72.6	8,533	7 5-16
1897.....	1,903	28.3	530	*80.8	10,898	5 13-16
1898.....	1,924	*28.7	675	58.2	11,189	5 9-16
1899.....	2,078	*30.3	547	58.4	9,143
1900.....	2,105	*35.7	522	62.0

The difference between staples produced mainly in this country and such as are grown more largely outside is plainly shown in comparing changes in crop amount from one year to the next, with simultaneous changes in price. Since 1883 there have been but five years when the average farm price of corn has failed to move in a direction opposite to the crop-figure movement—to rise as the crop decreased, or fall as it increased. From 1891 to 1892, and from 1892 to 1893, both production and price fell; from 1897 to 1900 both rose in each consecutive year. From 1883 to 1899 there were but three instances when the price of cotton took the same course as the production. When we come to wheat, however, of which the amount grown in this country has only once reached one-fourth of the world's product, exceptions become more numerous, especially after 1890. For several years before that date the rule of production and prices had been followed as closely for wheat as for corn or cotton, the exception indicated in a slight fall both in production and in price between 1886 and 1887 being fairly doubtful; but the changes afterward have set the rule completely at defiance. Prices persisted in falling from 1891 to 1892, and from 1892 to 1893, notwithstanding diminishing crops in the United States; while the rises from 1890 to 1891, from 1894 to 1895, and from 1896 to 1897, accompanied increased crops. With corn and cotton, therefore, we are justified in regarding crop conditions in this country only; with wheat, we must pay at least equal attention to those in Europe, whose total wheat harvest, except in 1891 only, has always been more than double that of the United States.—Crop Reporter.

Kansas Is All Right.

GOVERNOR W. E. STANLEY.

The present drought throughout the West has been very injurious and in Kansas has worked a practical [The governor should have said "partial destruction of the corn."] destruction of the corn. There are certain portions of the State where the corn crop is in fair condition and with seasonable rains Kansas might produce 50,000,000 bushels, but the latter part of July and the month of August is always the trying period for the corn and very little hope may be entertained for this crop. It may as well be considered a substantial failure.

But with the corn crop wholly eliminated Kansas is in better shape this year than in many past years, and while the comparison affords no particular cause for encouragement, it affords no ground for discouragement.

The value of our wheat this year will be equal to or greater than that of last year, which in round numbers

was \$42,000,000. Our live stock products will be at least \$60,000,000, alfalfa and other forage crops \$5,000,000, hay and grasses \$2,000,000. This makes a total of \$109,000,000 for farm products,

not counting corn, oats, potatoes, fruit and many other things of which considerable quantities will be produced.

The farm products of Kansas, consisting of wheat, corn, potatoes, forage crops, and live stock products, for the last ten years aggregate more than \$1,460,000,000.

During this period we had three short years, the value of the product for 1893 being \$122,000,000; 1894, \$113,000,000; 1896, \$116,000,000, so that the entire farm products this year will nearly equal the entire farm products of the best of the three years above mentioned.

The bank deposits of these three years were approximately as follows: 1893, \$55,000,000; 1894, \$55,000,000; 1896, \$50,000,000. The bank deposits of Kansas at this time aggregate about \$70,000,000. The farm products will be more than \$109,000,000, and these will therefore exceed the sum of the farm products and bank deposits for the best of the three small years since 1891.

Taking our farm products alone for twenty years and dividing them into periods of five years each, commencing with 1882 and ending with the present year, we have for the first period a farm production of \$675,000,000, for the second \$696,000,000, for the third \$646,000,000 and for the five year period ending with the present year \$750,000,000.

In 1896, the last short year we had in Kansas, our indebtedness was very large and the amount of money going out of the State to pay interest was enormous. Since that time public and private indebtedness has been largely reduced, and the remainder is bearing a much lower rate of interest than ever. Thousands of farmers who were in debt at that time are now out of debt, with deposits in the bank, and we owe many million dollars less in Kansas than we did in 1896.

It is too evident for discussion that the present drought in the West will work serious injury and that it will lead to much discouragement, but so far as Kansas is concerned it will not be altogether without good results. Had there been a large yield of corn, with good pasturage, following our immense wheat harvest, immigration would have turned toward the State and attempted to open up western Kansas to general agriculture. Already the steps of the immigrant were turning in that direction, and with a bountiful corn crop following the unequalled wheat crop in the State, it is safe to say that the western third of the State would have more than doubled in population in a short time. The result would have been disastrous. That experiment has been tried in Kansas twice; both times it has proven a failure and will prove a failure as often as tried.

Western Kansas is peculiarly a stock country and well adapted for the graz-

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ing of large herds and the raising of forage plants to carry them safely through the winter season. The present dry weather and practical failure of the corn crop will prevent a repetition of the unwise experiment that has twice proved a failure and thus prevent the recurrence of the hardships that have twice followed the attempt to open up western Kansas to general farming.

The year 1901 will mark the close of a five year period the most successful that Kansas has ever enjoyed. With 75,000,000 bushels of the best wheat that was ever raised in her granaries, with \$70,000,000 deposited in her banks, with 40,000,000 bushels of old corn on hand, with larger herds than ever in her pastures and forage plants necessary to carry them through the coming winter, with a people less elated by success and less discouraged by adversity than ever before, Kansas is all right.

Wants Alfalfa Seed.

EDITOR KANSAS FARMER:—Will you please let me know where I can get alfalfa seed, new seed of 1901? When is the most favorable time to sow it? Galesburg, Kans. J. MARTIN.

This is a sample of many inquiries. Those having seed for sale will do well to advertise it in the KANSAS FARMER. A small expenditure in this way will bring surprising results. The best time to sow alfalfa in the eastern half of Kansas is the latter part of August or first week of September. The soil should be prepared at the earliest possible date. Make a good fine seed bed. Keep it well harrowed and sow as soon after the middle of August as there is sufficient moisture in the soil. Use 20 pounds of seed to the acre. Sow with a press drill if possible, otherwise sow broadcast and cover with a light harrow.

Brain Markets.

Conducted by James Butler, secretary of the Farmers' Co-operative Grain and Live Stock Association.

"The human race is divided into two classes,—those who go ahead and do something, and those who sit still and say, why wasn't it done the other way."—Oliver W. Holmes.

Grain Markets to 2 p. m., July 22.

The markets in all the commercial centers were very wild to-day. Wheat, corn, and oats were wanted and wanted badly. The protracted drought having destroyed vegetables, grass, and forage plants, an increased demand is being created for wheat, and wheat neglected as it has been for sometime, is being wanted everywhere. Wheat for export, wheat for bread, and wheat for feed is the cry from all quarters. We believe wheat will sell around the dollar mark in Chicago in a short time, unless copious rains of a general character all over the United States shall come immediately.

The millions of bushels of corn lost by the drought, and the hay and potato crops shortened by the same cause, must all be made up from the wheat surplus, hence farmers should hold on to their wheat. Americans want it, Europeans want it, everybody wants it, and it will bring a good price if held.

Market closed as follows to-day:
Chicago.—No. 2 red wheat, 73c; No. 2 Kansas hard wheat, 72c; No. 2 corn, 58 to 59c.
Kansas City.—No. 2 hard wheat, 67½ to 68c; No. 2 corn, 60 to 62c.

The Grain Fight Begins.

The trust has begun its fight against the farmers' elevator at Solomon, but the farmers are not grieving over it.

The Light Elevator Company, which operates on the Santa Fe, opened at Solomon yesterday, and put the price of wheat up to 54 cents a bushel. The Kansas City market warranted a scant 52 cents, and at Talmadge, 13 miles from Solomon, the Light company was paying only 49 cents.

The farmers' elevator at Solomon has been handling nearly all the wheat that has come in there, shipping out as high as 11 cars in one day recently. July 19, instead of taking in the grain the farmers' elevator simply weighed it and then directed the members to take it to the Light elevator and sell it at 54 cents. After the sale the members came back and paid their own elevator a cent a bushel, the regular charge of the cooperative elevator for handling the wheat. The result was that the Light company did a big business that day. Just between noon and 3 o'clock the farmers' elevator sent 12 loads to Light's. It's a good thing for the farmers.

The farmers around Talmadge are

aroused over the action of the trust, and a delegation visited Solomon last week and asked to be allowed to join the Solomon organization and have a branch elevator established at their place. The Solomon directors advised that they organize a cooperative association of their own. They already have an elevator leased. S. H. McCullough, J. H. Johnk, A. P. Collins and W. T. Harris will go over to Talmadge Saturday night and help to organize the association there.

The Solomon elevator is at present handling the grain for the Niles association until the latter can get its elevator built.

The Solomon farmers have already met the "car famine" question and have come out victorious with scarcely a struggle. About two weeks ago the Union Pacific, on which the farmers' elevator is situated, failed to furnish the cars necessary for shipment. The elevator became full, but instead of making a complaint, the farmers' elevator ordered cars of the Rock Island, got them speedily and began to haul grain to the Rock Island track. The wagons were loaded by driving them on the side track where the cars were loaded when there were any. The Union Pacific company did not like to see grain hauled away from their track to the Rock Island. On Monday morning of last week, a Solomon correspondent writes The Herald, the farmers found a string of loaded coal cars in front of their elevator, so that they could not load as they had been doing.

Instead of making a complaint the management simply sent for a carpenter, and in an hour's time a chute was made that would load wagons on the dump, a better arrangement than the other, and the work of shipping on the Rock Island went merrily on.

A Union Pacific freight agent came around and saw how things were going, and the next morning the coal cars were gone and a string of empty grain cars were in their place. There has been no trouble about grain cars since.

"On a five months' run my partner and I cleared up \$5,000 in net cash. This I consider a very fair business, don't you?" This was the language of a member of the Kansas Grain Dealers' Association who was talking to us in common conversation the other day. How many farmers have cleared up a net \$5,000 in five months' time.

The Veterinarian.

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

Heaves.—I have a horse with heaves brought on by eating bad hay. Can you relieve him? The local veterinarian can not help him. A. E. HARMON.

Cheney, Kans.
Answer.—Linseed oil 1½ pints, calomel 1 dram, and barbadoes aloes 6 drams. Mix and give at once on an empty stomach. Then follow up, when the purgative has acted, with fluid extract of nuxvomica 4 ounces, fluid extract of belladonna 2 ounces, mixed with enough water to make a pint and a half. Give 1 ounce every four hours. Water a half hour before feeding and give oats and bran, cooked with new hay or grass, sparingly.

Injured Penis.—I have a thoroughbred Shorthorn bull. He had a swelling come on the middle of his penis about three weeks ago. He is willing to serve a cow but can not get his penis out. I first used ether and laudanum, about 2 ounces of each in 1 quart of water, then iodine and finally powdered alum and salt petre, about ¼ pound of each in a gallon of water, but without any improvement. What shall I do for him?

Alden, Kans. Geo. Ross.
Answer.—Inject the following once a day: Plumbi acetate 2 ounces, zinc sulphate 1½ ounces and water 4 quarts. Inject ½ pint once a day, keep him away from the cows and give him rest for several months.

Distemper, Weakness, and Paralysis.—I have a mare, with colt three months old, that has had distemper ever since the colt was born. She had a cough for awhile but I doctored her

with home remedies and she seemed to be getting along all right. She picked up and looked well. I worked her in the harvest field and she seemed all right until the last two days when I noticed that she began to go down and her nose began to run and that she had seemingly lost the use of her lower lip. I have doctored her for some time, but she still loses flesh and the lips hang down as if paralyzed.

Russell, Kans. C. C. CLARKE.
Answer.—Giver her 1 ounce, three times a day in a pint of water for two weeks, of elixir of callosa, barb iron and strychnine. Keep her out of the sun and feed well.

Erythema.—Something strange effects my shoats. The nose and legs seem inflamed and sore. This is the third attack, usually lasts several days and disappears. Hair is rough and legs scabby and cracked. The nose sometimes cracked and swelled, showing a scarlet color. The disease does not seem to effect their appetite or growth. Thirty head receive scoop of corn twice a day and run of alfalfa patch, are fed skim-milk and have ashes always before them.

Formosa, Kans. H. M. JOHNSON.
Answer.—Dip them in Zenoleum and fish oil, 1 part each to 50 parts water. Repeat in a week.

Gossip About Stock.

J. G. Mohler, of Salina, Kans., who has well equipped pastures, shelter, and running water, wants some registered Shorthorn cattle to handle on the shares. This is a chance for drought stricken breeders.

The Maple Leaf Farm Shorthorn cattle, owned by James A. Watkins, of Whiting, Jackson County, Kans., has a number of good young bulls for sale, including an extra good one by Golden Lad (M. A. Low's herd bull), and out of a Flat Creek Mary dam.

Owing to the limited time in advertising and the extreme hot dry weather Hiram Smith only sold a very few of his Poland-Chinas at his dispersion sale. He expects to close out the balance at private sale. A big bargain for some body who desires first class Poland-Chinas.

Breeders of Berkshire hogs should have a catalogue of the breeders Combination Sale to be held at Kansas City, Mo., on Thursday, August 1, 1901, under the management of the American Berkshire Association. It is intended to make this an opportunity to secure stock suitable for the fairs this fall.

For the first time in the history of the Kansas City market hay sold in carload lots, at that point last week for \$20 a ton. The remarkable drought in the Mississippi valley has made feed of all kinds high in price and hay prices doubled in a week. The remarkable price of \$20 per ton was maintained only for a day.

Mr. G. W. Stockham, manager of the Midland Hotel at Kansas City, Mo., authorizes the announcement that the Midland Hotel Special for the Shorthorn show to be held at Kansas City, Oct. 16-25, will be a cash prize of \$600, to be awarded to the best breeding herd to consist of one bull any age and eight cows, each to have a calf at side under one-year-old as recorded under the August 10th rule. Entries are to be made with the American Shorthorn Breeders' Association the same as in the regular classes.

Range breeders had some pretty lean years, from 1893 to 1898, when they either marketed few horses or sold them so cheap that there was no money in them. But now things are different. Ranchmen are selling plenty of horses and getting good figures for them. Last week 3,500 head were offered at one sale at Sioux City, Iowa, probably the largest number ever brought to one place at one time for sale. Yet we hear of few stallions being bought for range purposes. As the horses leave cattle and sheep are taking their places in many sections. In others where water is not so plentiful horses will be found most suitable and will be retained; but the western range country has seen its palmiest days in horse breeding.—National Stockman and Farmer.

McLaughlin Bros., Columbus, O., write: The largest importation brought from across the water by any single firm in one ship arrived in Columbus, O., July 17, and the horses are safely unloaded and in our stables all well and in good condition, considering the long journey that has just come to an end. Not only do we bring the largest number but we get the best horses. There are many horses sold in this country for less money than we pay for our horses in France. There is only one way to get the best and that is to be willing to pay the price that will command the best. Those who have cheap horses to sell in this country take second choice in France no matter when they buy them. The importation that has just arrived consists in the major part of horses selected by and bought by Mr. McLaughlin in France last year. The remaining part consisting of much the smaller number were bought during the past spring months and were most of them horses saved by the French breeders for us because they wished to favor us by letting us have their best ones. Our experience in the past has proven to us that nothing is too good for the enterprising thrifty American farmers and breeders. We attribute our success in selling more stallions in this country than are imported by all of our competitors to the fact that we bring only the best ones, those that would be of the most benefit to our patrons in this country.

Hogs and the Chicago Market.

What might be said to be a most fortunate misfortune for the farmers is the present high price being paid for hogs, when so many are being shipped on to



Don't tie the top of your jelly and preserve jars in the old fashioned way. Seal them by the new, quick, absolutely sure way—by a thin coating of pure, refined Paraffine Wax. Has no taste or odor. Is air tight and acid proof. Easily applied. Useful in a dozen other ways about the house. Full directions with each pound cake. Sold everywhere. Made by STANDARD OIL CO.

the market, owing to the great scarcity of rain and unfavorable outlook for feed in some localities. The highest price since 1894 is to-day being paid on the Chicago market—\$6.40 per 100 pounds, and the price can be said to be the natural result of supply and demand. Chicago packers have never had such orders for pork products as at the present time, the demand extending over all classes—the middle light hog to the heavy porkers. This is certainly a boon to the farmer who feels compelled to ship. It is truly said, "What is one man's misfortune is another man's gain." And this will prove true regarding production of hogs this year. Sections that have drifted away from hog raising, owing to low prices in the past, cholera and other causes, will now re-engage in the business, owing to the demand and the apparent continued scarcity which must result from the drought now extending over a large area of country, especially while prices are remaining so high. With the rush of shipping on, shippers should be careful to get on the right market, which is Chicago, the greatest market in the world, where receipts of any class of live stock can never be great enough to overload the market.

HOGS ARE HIGH.

Chicago sold hogs to-day at \$6.40, the highest price since 1894, when \$6.75 was While hogs were being dumped on western markets and selling at absurdly low prices, there were not half as many hogs here as the demand called for.

Packers were buying light hogs at Kansas City at \$5.50-5.60 such as sold in Chicago at \$6.05.

There are many people who feel forced to sacrifice their hogs.

That is bad enough without forcing them upon the market most affected by drought-stricken stock.

If the hogs that are going to Kansas City, that do not need to go there, should come to Chicago, the Kansas City market would be given a chance to recover.

If hogs must be sacrificed, send them where they are wanted.—Live Stock World, July 12, 1901.

KEEP YOUR EYE ON CHICAGO.

Hog shippers in Missouri who are forced to market their hogs because of the excessive dry weather would do well to keep an eye on Chicago and observe the unusual high range of quotations current here at present. To-day hogs sold up to \$6.40, which is not only the highest of the year, but the highest since 1894. The supplies here lately have been below the normal, and the demand good. If Missouri shippers are wise they will turn their hogs toward Chicago instead of sending them to the oversupplied Missouri river markets. A string of hogs came here to-day from Kansas City that cost on that market \$5.50 to \$5.55—50 cents below prices here at the time they were purchased. Railroad rate are also more favorable, and much money can be saved by shipping here. There is no need of argument. Facts and figures speak for themselves.—Drovers Journal, July 12, 1901.

Ringling Bros. American Circus.

Topeka and Kansas will have no State fair this year. But on Tuesday, August 6th, Topeka will have Ringling Bros.' greatest show on earth with 1,000 people, 500 horses, 100 cages of wild animals, 30 elephants, 20 camels, and 300 circus performers. Everybody is invited to come to the big show, and forget their weather distress for one day at least.

Ringling Brothers have 500 magnificent horses, and they will be seen with the big show when it exhibits in Topeka, Tuesday, August 6. These superb animals represent many years of careful selection by expert horse buyers and breeders and the expenditure of many thousands of dollars. Every kind of high-bred equine is represented, from the smallest Shetland pony and the proudest Kentucky thoroughbred to the pure Arabian stallion and the most massive Shire and Percheron. It is from the latter strain that the draught horses are taken. There are 280 of these magnificent animals, and they form one of the most striking and effective features of the Imperial free tree parade. They are utilized for drawing the massive dens, cages and tableau cars, and are the subject of constant comment and limitless admiration. The big horses number 100 like, shapely, proudly-stepping thoroughbreds. Every horse among them has a famous pedigree. They are perfection of equine form and trained intelligence. The trick horses number matched and thoroughly trained American and imported animals. An equal number of Shetland ponies, the delight of children, and the cynosure of all eyes in the parade, in the gorgeous spectacle or the mammoth horse fair, complete remarkable and unequalled display stock. These horses are presented hundred different performances.

The Home Circle.

A LETTER.

"Dear Gran'ma and Gran'pa:
 I don't like this place,
 'Cause no one ain't wearin'
 No smile on their face
 Like you always do, an'
 They spanked me instead
 O' kissin' me, after I
 Fell off the shed.
 This mornin' they say I'm
 Not goin' to be
 No angel hereafter
 Fer takin' jest three
 Small pieces o' sugar—
 An' chasin' th' cat,
 An' goin' in swimmin'
 'An' losin' my hat;
 An' scarin' th' peacock,
 An' climbin' th' trees
 An' gittin' all bit up
 By bumble-ee bees,
 An' racin' th' turkey
 An' bangin' th' door,
 An' muddyin' over
 Th' clean kitchen floor.
 They ain't got no smile or
 No kisses fer me.
 They think I'm jest wicked
 As wicked can be—
 An' call me a worrit
 An' tormentin' pest,
 An' say I deprive 'em
 O' quiet an' rest.
 Dear Gran'pa, to-morrow
 I want to go back;
 Please get here as early
 As anything, Jack."
 —F. W. Sterns in Puck.

THE MAN OF THE WEEK.

Nathan C. Meeker.

(Born July 12, 1814; died September 29, 1879.)

"Speed the Plow" are the last words Mr. Meeker wrote for publication. Without being a successful farmer himself, he had devoted the best years of his life to agriculture, and died by the cruel hands of savages whom he was trying to teach the peaceful art symbolized by the plow.

Twenty-one days before his death, Mr. Meeker wrote his last letter to the Greeley Tribune, the paper he had established to promote the interests of the colony he had originated. He had had trouble with the Utes. Plowing was not to their liking—hunting and horseracing suited them better. This last article was headed "Bullets and Plows," and its closing paragraph is suggestive and prophetic:

"This stopping plows by bullets is by no means a new thing in America; for, so to speak, the plow has plowed its way from the Atlantic to the heart of the Rocky Mountains, through showers of bullets, and the American plow is yet to turn furrows across China and the Steppes of Tartary, and even invert the soil around sacred Jerusalem. 'Speed the Plow!'"

As an Indian agent, Mr. Meeker was a failure; his tragic death was proof enough of that; but as an organizer of the most famous of western colonies he was a pronounced success. His life had been full of vicissitudes. He had taught school in Ohio and Pennsylvania; had worked on a New Orleans newspaper; had written for Ohio and New York papers; had been merchant and farmer; had imbibed the social doctrines of Fourier and spent three years with an Ohio Phalanx; had been a war correspondent and afterwards agricultural editor of the New York Tribune; had originated and founded the Union Colony of Colorado and the town of Greeley; and at last, with the hope of saving enough to pay his debts, had accepted the White River Indian Agency near where the town of Meeker now stands. But for the success of his colony enterprise, there was little to record to his credit but a life of devotion to high ideals—and failure.

The town of Meeker is a monument to Mr. Meeker's misfortune; but Greeley and the Union Colony stand for his success. They are the fulfillment of the dreams of his early manhood, the result of the hopes and labors of his mature years. The story is full of interest.

In the fall of 1869, Mr. Meeker made a trip to the West for the Tribune, writing interesting letters by the way. On his return to New York he was full of the idea of establishing a colony in Colorado. He mentioned his ambition to John Russell Young, who talked it over with Mr. Greeley; and that great man, at the first opportunity, said to the returned correspondent, "I understand you have a notion to start a colony to go to Colorado." When Meeker answered "Yes," Greeley said: "Well, I wish you would take of it; for I think it will be a success, and if I could I would help."

Such encouragement, Mr. Meeker spent the following day in writing an article announcing his purpose and outlining the plan which was af-

terwards adopted as the constitution of the colony. Mr. Greeley suggested a few minor changes, after which the article was printed and kept in type for a week, in order, as its author said, "That there might be due reflection and no haste." It was published in the Tribune of December 14, 1869, with an editorial endorsement of the plan and its originator. Nine days later the colony was organized; and yet in that short time more than a thousand letters had been received in answer to the article. On the fifteenth of the next April the certificate of organization of "The Union Colony of Colorado" was filed for record.

Mr. Meeker's experience as a member of the Trumbull Phalanx had taught him "how much coöperation people would bear," and he carefully avoided those features which most people will not bear. Union Colony was a unit in a limited sense only. The colony dug the famous ditch which made possible the prosperity of the community and built the "colony fence" which kept the range cattle off the colony lands; but in most respects every man was responsible for his own success or failure. There could be little or no successful shirking. The man who would not try to do his share could not make himself a burden on his more industrious neighbors. The colonists believed in coöperation in large matters. No man could dig a ditch ten or fifteen miles long to bring water to his farm; but the colony could dig a canal to water hundreds of farms. This canal and the farmers who made it and used it taught the West many of its best lessons in irrigation. As Elwood Mead has said, the Union Colony "became the second historic instance" of the beginnings of the present system of irrigation, "and one which furnished a different standpoint for a study of the subject." Best of all, the colonists were not satisfied to do as others had done and were doing. To further quote Professor Mead, "The highest methods both of irrigation and cultivation were sought out through numberless experiments, until Greeley and its potatoes grew famous together. The home and civic institutions of the colony became the pride of the State, and the hard-won success of the community inspired numerous similar undertakings and furnished an impulse which resulted in the reclamation and settlement of northern Colorado."

Mr. Meeker founded a remarkable community—one that can hardly be matched in the United States. The colony was composed of picked men, believers in temperance, morality, education, religion, and the home.

To organize such a colony and to found such a city as Greeley, and to set in motion the forces that are constantly going out from them—forces that make for intelligence, thrift, and righteousness—to do all this, even at the cost of hardship, poverty, and martyrdom, is not this success of the noblest kind?

Meeker and his fellow colonists were pioneers of the best type. They were builders of homes, schools, and churches. They made a new agriculture in the desert, leading captive the waters which summer suns set free from the snow-capped mountains that for ever looked down on the scenes of their privations and their prosperity. They made the desert bloom, and did it without robbing their children of the opportunities which are the heritage of those born and bred in cultured American communities.

D. W. WORKING.
Denver, Colorado.

Don't Worry.

It is amazing how much trouble a human heart can hold without exploding, says the Chicago Record-Herald. It is even more amazing how many imaginary grievances some misguided mortals can conjure out of their own thoughts. Wait until you have a real grief. Wait until you have a trouble so deep and terrible that you can't shed a tear to save your life. Then you'll wonder why you ever wept your nose red because the collar of your spring coat had a pair of crow's-feet in its seams. You'll be amazed at your own foolishness for worrying over wall paper that didn't match the green rug. It will set you thinking hard when your mind wanders back to the day when you thought you wanted to die because you had a blister on your heel and a long tear in your new swiss gown.

The world is much the sort of a place that you make it yourself. If you haven't any troubles, for heaven's sake do not put on your Sunday hat and rush out to seek them. What if the oven of the gas stove is broken? You can eat bread if you can't have

toast. What does it matter if your shirt waist sleeves are just a bit too short? That's nothing. Anyhow, not enough to make yourself miserable and sick about. If you have nothing more to worry you than the simple mistakes and mixed-up events of ordinary existence, get down on your knees and thank God from the depths of your heart. You are in luck. You are in great good luck. You should be shouting anthems of joy and thanksgiving.

There are few individuals in this sad, beautiful old world who, one time or another, do not feel the heart-illness of a crushing sorrow. It seems as if these painful experiences were necessary to make us realize that the privilege of being alive is a tremendous one, and one which should not be overlooked. When your dose comes, take it like a man, put on the boldest front you can—and hope.

There is a woman who lives not a million miles away from Chicago who has everything on earth that a sane woman should or could want. But, bless your heart, she stays awake nights so as not to get behind with all the fretting she has on file. If she has to make a pretty petticoat for the baby she has all sorts of mental spasms because she paid a little too much for the embroidery. If the cook lets the bacon get a bit too crisp that woman is in acute despair. When the rain beats down and the cellar looks like a tidal wave let loose she shrieks all sorts of shrill high notes from low A to high C, and then takes to her bed with an ice pack on her head. When a burglar picks at the basement door and walks away with a bag of closepins and the clothes-wringer, she acts as if the entire family had been seized with the smallpox.

Poor lady! She doesn't know how lucky she is to have the bacon too crisp or the basement of the house a bit too moist. And she doesn't know how much precious time she is wasting in fretting over trival matters which are so unavoidable and which, compared with real troubles, amount to nothing at all. The trouble with this particular type of femininity is that she burdens everyone she meets with her long, tedious recitals of tear-compelling trials. One wants to run around the block at the first glimpse of the bobbing aigrette on her hat.

The Desire for Youth.

"How can my wealth help me?" asked Andrew Carnegie of Mr. T. P. O'Connor. "I am 60 years old and I can not digest my food. I would give you all my millions if you could give me youth and health." After a pause Mr. Carnegie went on: "If I could make Faust's bargain I would. I would gladly sell anything to have half of my life over again." And Mr. O'Connor adds: "I saw his hands clench as he spoke."

It is possible that Mr. O'Connor exaggerates, or that Mr. Carnegie, if he spoke as reported, had an especially severe case of dyspepsia at the time. Faust sold himself to the devil, body and soul, the bargain to the consummated at the end of twenty-four years, provided that the Evil One should meanwhile serve Faust. It is hard to imagine the self-restrained Scotchman taking the part of Faust in that memorable bargain. But the wish for the renewal of youth is common enough. Andrew Carnegie is simply a twentieth century Ponce de Leon. Only a better scientific knowledge prevents the millionaire from starting on a search for the fountain. While the regret of the aged at growing old may be easily appreciated, it can hardly be regarded as a normal feeling. The coming of gray hairs is a natural process. Man is by nature fitted for old age. It is not a thing to be dreaded and shunned. The true philosophy of life was understood by Browning's Rabbi Ben Ezra when he said:

Grow old along with me,
 The best is yet to be.

Yet it is undoubtedly true that many men, like Mr. Carnegie, dread the approach of age. Where it means the breaking down of the powers, the loss of sight, of hearing, of the mental faculties, they are justified in their feeling. But if the healthy old age of such men as Bismarck and Gladstone is to be feared, nature must be a tremendous blunder. The trouble seems to be as La Rochefoucauld said, that few people know how to be old. This is something that can not be learned from books. It grows out of experience. The man or woman of wisdom and broad human sympathies is taught the lesson with advancing years. He knows that it will be his own fault if he loses the feelings of youth. He understands that it is pos-

That Gold Spoon.

There are some men who seem to be favorites of fortune. They are industrious, cheerful workers, full of overflowing of the energy of splendid health, and success seems fairly to drop into their hands. It is of such as these that



the less hardy and less successful man says enviously, "That fellow was born with a gold spoon in his mouth." And yet on analysis it will be found that this success is largely due to

splendid health, the endowment of a healthy mother.

Dr. Pierce's Favorite Prescription gives the mother health to give her child. It cures nervousness, nausea and sleeplessness. It makes the body comfortable and the mind content. It gives physical vigor and muscular elasticity so that the baby's advent is practically painless.

"I will endeavor to tell you of the many benefits I have derived from taking Dr. Pierce's Favorite Prescription," writes Mrs. B. E. Robertson, of Medicine Lodge, Barber Co., Kans. "In the fall of 1899 I was expecting to become a mother and suffered terribly with pains in the back of head; in fact I ached all over. Suffered with awful bearing-down pains; I was threatened for weeks with mishap. A lady friend told me to use Dr. Pierce's medicines. She had taken them and felt like a new woman. I began using the 'Favorite Prescription' and took four bottles before my baby came and two afterwards. I suffered almost death with my other two children, but hardly realized that I was sick when this baby was born and she weighed twelve and one-quarter pounds. She is now eleven months old and has never known an hour's sickness; at present she weighs thirty-seven pounds. I owe it all to Dr. Pierce's Favorite Prescription."

"Favorite Prescription" makes weak women strong, and sick women well. Accept no substitute for the medicine which works wonders for weak women.

Dr. Pierce's Pleasant Pellets are the most desirable laxative for delicate women.

sible to be 70 years young, as Oliver Wendell Holmes put it.

After a hard day's work it is good to sit down and rest in the evening—to read and to reflect. One does not fret under ordinary conditions because the night has come. The work of the day is done—well or ill—but done. Then is the time for rest. Stevenson, stricken with a mortal disease in youth, trembled lest he hear, his "work untrimmed, the sunset gun too soon." But for most men there is no such apprehension.

The wish for the renewal of youth is usually accompanied by the implied condition that the experience of age accompany it. Else what would be the gain of becoming young? Men often express the wish that they might live their lives over, forgetting that they would blunder along the second time just as they have the first, if they had no experience to guide them. Yet youth with the wisdom of age would be an uncanny thing. The philosophic mind of the man of 70 would be wholly out of place in the body of the boy of 25. Few persons would care to have life over if they were doomed to stumble through it as new beings, utterly cut off from the experiences of the past. They might as well die, for their previous existence would be annihilated as if by death.

The second alternative where the mind grows old but the body renews its youth, is wrought out in the weird story of the Wandering Jew. That tale of horror of a never-ending earthly existence represents the normal feeling of the race toward such a fate. Mr. Carnegie did not weigh well the consequences of his wish. The attitude of the sane and vigorous man toward the inevitable end is finely expressed in Stevenson's "Requiem:"

Under the wide and starry sky,
 Dig the grave and let me die,
 Glad did I live and gladly die,
 And I laid me down with a will.

This be the verse you grave for me:
 "Here he lies where he longed to be;
 Home is the sailor, home from the sea,
 And the hunter home from the hill."

Brain Rest.

"What is it you like so much about golf, Mr. Noodler?"

"Why, you know, it makes me think of something to talk about—you know—without having to think up something to talk about—you know."—Chicago Record-Herald.

The sowing of evil seed is an irreparable evil; none can tell where the wind will carry it, and unexpected crops are found far and wide.—George Moore.

The Young Folks.

PATTY CAKE.

Old Lucullus was a feaster with a record hard to beat,
 And old Nero had some banquets rich and rare;
 But each evening I'd be willing to trot each of them a heat,
 For I have a feast of good things and to spare.
 Though no china rare and costly gives my board an added grace,
 Though the viands do not come across the sea,
 I'm content, for rich and flaky, by my long-accustomed place
 Is the "patty-cake" Lorena makes for me.

Patty-cake, patty-cake, baker man;
 Roll 'em, roll 'em, fast as you can.
 Pick 'em, pick 'em, cute as can be,
 Toss 'em in the oven for papa and ma.

At rare banquet boards I've feasted when the wine of wisdom flowed
 Till the flying hours of night merged into day;
 But my heart was ever turning to my humble, bright abode,
 Where a baby spends her waking hours in play.
 For I knew the little darling, ere she closed her laughing eyes,
 Sat in state upon her mamma's dancing knee
 And prepared for absent papa such a wonderful surprise—
 Made a toothsome little "patty-cake" for me.

Patty-cake, patty-cake, baker man;
 Roll 'em, roll 'em, fast as you can.
 Pick 'em, pick 'em, cute as can be,
 Toss 'em in the oven for papa and ma.

Finest fruits of fair Arcady, finest wines from Sunny France,
 Finest china and cut glass of beauty rare
 From which sparks of glowing splendor in their gleaming beauty glance,
 And the richest breath of perfume on the air—
 These may grace the brownstone palace of the haughty millionaire,
 But in happiness I'm richer far than he,
 For his millions and his palace I'd not trade the smallest share
 Of the "patty-cake" Lorena makes for me.

Patty-cake, patty-cake, baker man;
 Roll 'em, roll 'em, fast as you can.
 Pick 'em, pick 'em, cute as can be,
 Toss 'em in the oven for papa and ma.
 —From the Commoner

Famous Names in Kansas.

George W. Martin, secretary of the State Historical Society, has prepared, at the request of Henry Gannett, geographer of the United States geological survey, a statement of the origin of the names of the 105 counties of Kansas, and the same is given below. Students of Kansas history will find it particularly interesting. More than two-thirds of the counties bear the names of Americans famous in history or of men active in the affairs of the State. Eleven are named after Indian tribes and one after an Indian chief. Two get their names from counties of other States and one from rivers which traverse it. One (Republic) perpetuates the memory of the old Pawnee republic.

Some of the counties have lost their right names by the careless spelling of law-makers and map-makers. Instances are Clark for Clarke, Kearney for Kearny, and Osborne for Osborn. Sometimes the newspapers and legislators add an extra "s" to Douglas and a town in Butler County, originally named after Stephen A. Douglas, is spelled with a double s by law. Greeley is sometimes spelled without an "e" in the final syllable, but so far the map-makers have spelled it correctly. Barber for many years was on the map as "Barbour," but a legislative enactment changed it. Four counties—Cloud, Finney, Crawford, and Kingman—bear the names of men still living. Many bear the names of private soldiers of the civil war. Mr. Martin's research corrects some mistakes. For instance, it has been popularly believed that Ellsworth County gets its name from the young Illinois soldier who was killed at Alexandria, Va., in 1861, and Osborne has been credited to ex-Governor Thomas A. Osborn. They were named after an Iowa and a Kansas soldier, respectively. Clark County, originally spelled with a final "e," has been claimed for Sidney Clarke, once famous in Kansas. He was a soldier of the civil war.

Following is Mr. Martin's statement:
 Allen.—William Allen, United States Senator from Ohio, 1837-1849.
 Anderson.—Joseph C. Anderson, member of the first Kansas territorial legislature.
 Atchison.—David R. Atchison, United States Senator from Missouri, 1843-1855.
 Barber.—Thomas W. Barber, free-state martyr, murdered near Lawrence, December 6, 1855.
 Barton.—Miss Clara Barton, philanthropist and founder of the Red Cross Society in the United States.
 Bourbon.—Bourbon County, Kentucky.
 Brown.—O. H. Browne, member of the first Kansas territorial legislature.
 Butler.—Andrew P. Butler, United

States Senator from South Carolina, 1847-1857.
 Chase.—Salmon P. Chase. Chautauqua.—Chautauqua County, New York.
 Cherokee.—Indian tribe.
 Cheyenne.—Indian tribe.
 Clark.—Charles F. Clarke, captain and assistant adjutant general, United States volunteers, died at Memphis, December 10, 1862.
 Clay.—Henry Clay.
 Cloud.—William F. Cloud, colonel of Second Kansas regiment.
 Coffey.—A. M. Coffey, member first Kansas territorial legislature.
 Comanche.—Indian tribe.
 Cowley.—Matthew Cowley, first lieutenant Company I, Ninth Kansas, died at Little Rock, October 7, 1864.
 Crawford.—Samuel J. Crawford, colonel Second Kansas regiment and governor from 1865-1869.
 Decatur.—Commodore Stephen Decatur.
 Dickinson.—Daniel S. Dickinson, United States Senator from New York, 1844-1851.
 Doniphan.—Alexander W. Doniphan, colonel in the Mexican war.
 Douglas.—Stephen A. Douglas.
 Edwards.—John H. Edwards, State senator from Ellis County, 1873-1874.
 Elk.—Elk river.
 Ellis.—George Ellis, first lieutenant Company I, Twelfth Kansas, killed at Jenkin's Ferry, Arkansas, April 30, 1864.
 Ellsworth.—Allen Ellsworth, second lieutenant Company H, Seventh Iowa cavalry.
 Finney.—David W. Finney, lieutenant governor, 1881-1885.
 Ford.—James H. Ford, colonel Second Colorado cavalry.
 Franklin.—Benjamin Franklin.
 Geary.—John White Geary, third territorial governor, 1856-1857; major general of Pennsylvania volunteers in the civil war and governor of Pennsylvania, 1866-1873.
 Gove.—Granville L. Gove, captain Company G, Eleventh Kansas, died November 7, 1864.
 Graham.—John L. Graham, captain Company D, Eighth Kansas, killed in action at Chickamauga, September 19, 1863, before being mustered in.
 Grant.—Ulysses S. Grant.
 Gray.—Alfred Gray, secretary of Kansas State board of agriculture, 1873-1880.
 Greeley.—Horace Greeley.
 Greenwood.—Alfred B. Greenwood, commissioner of Indian affairs, 1859-1860.
 Hamilton.—Alexander Hamilton.
 Harper.—Marion Harper, first sergeant Company E, Second Kansas, died from wounds December 30, 1863.
 Harvey.—James M. Harvey, captain Company G, Tenth Kansas, governor, 1869-1873, and United States senator, 1874-1877.
 Haskell.—Dudley C. Haskell, member of Congress, 1876 till his death in 1883.
 Hodgeman.—Amos Hodgeman, captain Company H, Seventh Kansas, died of wounds October 16, 1863.
 Jackson.—Andrew Jackson.
 Jefferson.—Thomas Jefferson.
 Jewell.—Lewis R. Jewell, lieutenant colonel Sixth Kansas cavalry, died of wounds November 30, 1862, at Cane Hill.
 Johnson.—The Rev. Thomas Johnson, missionary to the Shawnees in Johnson County, Kansas, 1829-1853.
 Kearney.—General Phil Kearny.
 Kingman.—Samuel A. Kingman, chief justice supreme court of Kansas, 1866-1876.
 Kiowa.—Indian tribe.
 Labette.—Labette river.
 Lane.—James Henry Lane, United States senator from Kansas, 1861-1866.
 Leavenworth.—General Henry Leavenworth, officer in the United States army from 1812-1834.
 Lincoln.—Abraham Lincoln.
 Linn.—Lewis F. Linn, United States senator from Missouri, 1833-1843.
 Logan.—General John A. Logan.
 Lyon.—General Nathaniel Lyon, killed at Wilson Creek, August 10, 1861.
 McPherson.—General James B. McPherson, killed at Atlanta, Ga., July 22, 1864.
 Marion.—General Francis Marion.
 Marshall.—Frank J. Marshall, member first territorial legislature.
 Meade.—General George G. Meade.
 Miami.—Indian tribe.
 Mitchell.—William D. Mitchell, private Company B, Second Kansas, and captain Second Kentucky cavalry, killed March 10, 1865.
 Montgomery.—General Richard Montgomery.
 Morris.—Thomas Morris, United States senator from Ohio, 1833-1839.
 Morton.—Oliver P. Morton, United States senator from Indiana, 1867 to his death, 1877.

Nemaha.—Nemaha River.
 Neosho.—Neosho river.
 Ness.—Noah V. Ness, corporal Company G, Seventh Kansas, died from wounds, August 22, 1864.
 Norton.—Orloff Norton, captain Company L, Fifteenth Kansas, killed November 11, 1864, at Cane Hill, Ark.
 Osage.—Osage river.
 Osborne.—Vincent B. Osborne, private Company A, Second Kansas, severely wounded January 17, 1865.
 Ottawa.—Indian tribe.
 Pawnee.—Indian tribe.
 Phillips.—William Phillips, free-state martyr, murdered at Leavenworth, September 1, 1856.
 Pottawatomie.—Indian tribe.
 Pratt.—Caleb Pratt, second lieutenant Company D, Second Kansas, killed at Wilson Creek, August 10, 1861.
 Rawlins.—General A. Rawlins, Secretary of War, March 11, 1869, died in office September 6, 1869.
 Reno.—General Jesse L. Reno, killed at South Mountain, September 14, 1862.
 Republic.—Pawnee-republic, a principal division of the Pawnee Indians, formerly located in that county.
 Rice.—Samuel A. Rice, brigadier general, killed at Jenkin's Ferry, April, 1864.
 Riley.—Major General Bennett Riley, officer of United States army, 1813-1853.
 Rooks.—John C. Rooks, private Company I, Eleventh Kansas, died from wounds December 11, 1862, at Prairie Grove.
 Rush.—Alexander Rush, captain Company H, Second Colorado, killed at Jenkin's Ferry, April, 1864.
 Russell.—Avra P. Russell, captain Company K, Second Kansas, died from wounds at Prairie Grove, December 12, 1862.
 Saline.—Saline river.
 Scott.—General Winfield Scott.
 Sedgwick.—General John Sedgwick, killed at Spottsylvania, May 9, 1864.
 Seward.—William H. Seward, who proclaimed Kansas "the Cinderella of the American family."
 Shawnee.—Indian tribe.
 Sheridan.—General Philip H. Sheridan.
 Sherman.—General William T. Sherman.
 Smith.—J. Nelson Smith, Second Colorado, killed October 23, 1864, on the Little Blue, Missouri.
 Stafford.—Lewis Stafford, captain Company E, First Kansas, killed at Young's Point, La., January 31, 1863.
 Stanton.—Edwin M. Stanton.
 Stevens.—Thaddeus Stevens.
 Sumner.—Charles Sumner, assaulted by Preston S. Brooks for his speech entitled, "The Crime Against Kansas."
 Thomas.—Major General George H. Thomas.
 Trego.—Edward P. Trego, captain Company H, Eighth Kansas, killed at Chickamauga, September 19, 1863.
 Wabunsee.—Pottawatomie Indian chief.
 Wallace.—General William H. L. Wallace, veteran of the Mexican war, died April 10, 1862, from wounds received at Shiloh.
 Washington.—George Washington.
 Wichita.—Indian tribe.
 Wilson.—Hiero T. Wilson, sutler and merchant at Fort Scott from 1843-1854.
 Woodson.—Daniel Woodson, secretary of Kansas territory, 1854-1857.
 Wyandotte.—Indian tribe.

A Debtor's Plea.

Governor McCorkle, of West Virginia, is fond of narrating the following story: "A colored man was telling a white friend about another negro who owed him \$2 and absolutely refused to pay the debt. The creditor dunned and dunned him, but all to no purpose. Finally the creditor went to his white friend, who is a lawyer, and poured his tale of woe

In a Glass of Water.

Put a handful of *glazed coffee* in a glass of water, wash off the coating, look at it; smell it! Is it fit to drink? Give

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into his ear. 'Well,' said the lawyer, 'if he positively refused to pay you what reason did he give?' 'Well,' said the colored man, 'he said he had owed me dat money fo' so long dat de interest had done et it all up, an' he didn't owe me a cent.'

Occidental.

The Emperor Kwang Su frowned darkly. "The West, forsooth!" sneered he. "How do I know that there is any West?" "Well, accidents will happen, you know!" exclaimed the Viceroy Li Hung Chang.

Fortunately his Majesty, by recourse to his Ollendorf, was able to gather substantially the full import of this clever jest, else the aged courtier might then and there have been divested of the shrimp pink golf stockings of a mandarin of the first rank.—Detroit Journal.

Mr. Woolly's Preference.

"So glad to see you, Mr. Woolly," said the Boston hostess, who was giving a musical dinner; "you are just in time. We are going to have a 'cello obligato before dinner." "Well, now," replied the western guest, "I won't take none, thank'y, but I would like a leetle old rye."—The Philadelphia Press.

A Fallen Angel.

Mrs. Newbride (who has been baking)—I wonder who first invented angel cake? Mr. Newbride (who had to sample the baking)—I don't know, but I fancy it was one of the fallen angels.—Philadelphia Record.

Expected Later.

Casey—An' so yer owld father doled laht noight. Wor his dith unexpected? Clancy—No, indade; but we didn't expect he'd doie for at laste tin or fiftane years yit.—Town Topics.

A Splendid Effort.

"I liked your speech the best of any of them." "Well, I'm gratified indeed, to hear you say so. Could you hear me plainly from where you sat?" "No, I could see you motioning, that was all."—Chicago Times-Herald.

If things do not turn out as you wish, let us wish them to turn out as they do.—S. Basil.

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Address all orders:

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116 West Sixth Ave., Topeka, Kans.

NOTICE EXTRAORDINARY. BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, and no single subscription will be entered for less than this price, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

The census bureau has just given out the following summary of the population of Kansas as shown by the census of 1900: Kansas, males, 768,716; females, 701,779; native, 1,343,810; foreign, 126,686; white, 1,416,319; colored, 54,176, including 52,003 negroes; 39 Chinese, 4 Japanese, and 2,130 Indians.

The KANSAS FARMER has many inquiries for new alfalfa seed. It may be observed that good sound alfalfa seed retains its germinability well so that seed two or three years old is not seriously objectionable. Those having seed will do well to advertise it in the KANSAS FARMER. There is going to be a strong demand for it.

Receipts of cattle at the Kansas City stock yards last Monday broke all records. Observers were surprised at the fact that the great majority were of butcher grades, for which prices are high. These fat cattle are going to market a little early on account of the shortage of feed, but they are bringing good money into the bank accounts of the farmers who produced them.

The KANSAS FARMER devotes a good deal of space this week to considerations of the peculiar crop and live stock situation with special reference to the best course of procedure to follow. It is a time for study as well as for action. The KANSAS FARMER will each week collect and present the best thought on the situation as it develops and will in every possible way help its readers to discover and make the best possible use of such opportunities as exist. There was never a time when the use of brains was more essential than right now. It will be found in the coming days that some farmers by taking thought have profited by the peculiarities that now confront them. Study the situation, act on your best judgment, and be among the lucky.

COOL IN SUMMER, WARM IN WINTER.

EDITOR KANSAS FARMER:—The extremely hot spell now on hand makes the time opportune to inquire how best to build a farm cottage so as to make it as cool as possible in hot weather as well as warm in cold weather.

The plan wanted does not mean a refrigerator—but a means by which heated air can be made to escape the room as well as cool air inhaled into it.

If ventilators are used, should they be inserted in the ceiling or sides of the room; if the latter how far from the top, and should more than one be used? Would dead air spaces be an advantage and in what way should the walls be built where the material used is lumber? Is it practical to use stone chimneys for hot air escapes. Believing that there are other broilers down here that will be benefited by the information you can give your readers along this line I ask for it through your paper.

Cheney, Kans. HENRY COMSTOCK.

Our correspondent could not have made more timely inquiries. From the Rocky Mountains to the Atlantic heat records have been broken and again broken during the last thirty-five days.

In order to be sure that the answers to these inquiries should be up to date, the editor called upon Architect L. H. Lescher, 920 Monroe street, Topeka. Mr. Lescher, besides being a regular graduate in architecture and designing, and our ex-State architect, has designed many of the most pleasant residences in Topeka, and many college buildings and other public edifices in various parts of the State. What is hereinafter stated is based on the writer's experience and is amplified and corrected according to Mr. Lescher's views.

The farmer should have the most comfortable and convenient house that can be contrived. The structure of wall to give coolness in summer is the same as that needed to retain warmth in winter. In a frame house sheeting of ship-lap or cheap matched flooring should be used. This should be covered with paper. Some use tarred paper, some rosin, and some use paper which has not been treated. Over the paper it is well to nail strips or laths corresponding with the studding so as to give a dead air space between the paper and the siding. Siding is about 5½ inches wide. If laid 4 inches to the weather and well painted it will be nearly air tight. To make this space between the paper and the siding a real dead-air space instead of a series of thin chimneys "fur" the spaces between the strips, at top and bottom. If the strips used are laths, thin laths will be just the right thickness to use in "furring." The spaces between the studding at top and bottom should be furred wherever they are not closed by sills and plates. Much of the advantage of double walls is lost if the air can escape at either top or bottom. Additional dead-air chambers may be made without great expense by lathing and plastering between the studding about two inches back of the face of the studding, thus dividing the air spaces. Dead-air spaces above the upper ceiling are as valuable as in the walls. A good circulation of air under the house is well in summer, but the openings should be closable in winter. Window and door frames and especially outside casings and siding should be of some wood that does not swell and shrink badly. White pine is ideal lumber for these purposes, but cypress and redwood are good substitutes. Yellow pine will change in size with every change of the weather. For inside finish, for floors, and for dimension stuff it is cheap and strong, but if a house is to be cool in summer and warm in winter yellow pine will not be used where its changes will make air holes. Let the plastering extend to the floors and to the window and door frames and have the inside casings and baseboards put on after the plastering is well dried.

The ventilation of the house is an important problem. Fruit-growers have found that they can maintain a fairly low temperature in their storage houses by constructing them under ground or with dead-air spaces in the walls and roofs, and allowing the cool air of the night to circulate through them but shutting off all circulation during the heat of the day. Dwellings similarly constructed may be managed in this way, but few persons are content with still aid in hot weather even though still aid in hot weather even though it is the most satisfactory arrangement is that which provides for thorough ventilation with as cool air as can be obtained. A brisk breeze cools a person by evaporating moisture from the surface of the body even though the temperature of the breeze be several degrees above blood heat. The best sum-

mer ventilators are open doors and windows. If the house can be constructed with a hall opening to the south so connected with other rooms that the air-current shall pass through the hall to the rooms occupied, the air will seem comparatively cool. The effect will be slightly better if the opening which admits the air to the hall be somewhat larger than that which lets it out of the hall into the room, while the opening which lets the air out of the room should be at least as large as that which lets it in. If the air blows over a nice lawn and through scattered trees before reaching the house it will be cooled. If the lawn be kept well sprinkled the cooling effect will be more noticeable. Shade of trees so planted as to cover the house, while offering little obstruction to the south winds help to keep down the temperature.

For winter ventilation the best of all is the old-fashioned fireplace. It is a good ventilator even if no fire be kept in it. It takes the cold air from the lower part of the room. Most of the impurities will sooner or later escape through the fireplace. Plenty of air to take the place of that which goes up the chimney will get into the best constructed house so that for a dwelling one need not be careful to provide openings other than the fireplace during such weather as requires that the temperature of the room be kept much above than that of the air outside. In extremely cold weather it may even be advisable to partially close the fireplace to prevent too great a rush of the warm air of the room up the chimney. Ventilators in or near the ceiling are seldom needed except in the kitchen and the bathroom. For each of these it is well to have a good large "register" near the ceiling leading to an outlet beside or into the chimney, care being taken to avoid interference with the draft of the chimney. The register may be arranged to open or close by a cord.

The foregoing suggestions are necessarily somewhat general in character. If they shall prove helpful in making homes comfortable and attractive their purpose will have been attained. Applied with common sense they will be found better than any "patent" arrangements yet offered.

OPEN HOUSE AT OAK GRANGE.

Oak Grange, whose hall and headquarters stand nine miles southwest of Topeka, is known all over Kansas. Chartered in 1873, it has prospered ever since. Last Friday this grange held an open meeting preceded by a big dinner in the great dining room. The yellow-legged chickens had as usual been well fed; they had been fried in butter to a rich brown, and were served with the other accompaniments of the great festivals to which the grangers' wives treat their families and friends on numerous occasions at Oak Grange.

After dinner the assembly hall was filled and the proceedings of the open meeting was presided over by Mr. Wallace. An address of welcome was given by Farmer Robert Stone, who farms a big brick house with two acres of land attached and attends to his law business in Topeka for recreation.

Worthy Master E. W. Westgate of the Kansas State Grange made a brief address on the work of the grange, and gave way to Mr. N. J. Bachelder, of New Hampshire, worthy lecturer of the National Grange. Mr. Bachelder reviewed some of the work accomplished by the National Grange. Among the achievements none stands out more prominently than rural free delivery of mail. It is not generally known that this was taken up and pushed through by the National Grange. At first it was hard to fix attention to it but by persistence a small appropriation was obtained with which to experiment. This was followed by demands for a larger appropriation. Promises were fair and the legislative committee of the National Grange went home. The free delivery item of the postoffice appropriation was stricken out in the senate. The members of the legislative committee were by wire summoned back to Washington. They came and fell upon the senators with such arguments as convinced them that a mistake had been made. The item was restored. Larger and still larger appropriations have followed until now it is the settled policy to extend free rural delivery to every thickly settled part of the country.

The national lecturer presented other objects for which the grange is working. Among these is the postal savings system. The plan of work is not by making politicians believe that overwhelming numbers are demanding the things advocated, but by agitating these measures until their desirability be-

comes recognized by both congressmen and constituents.

The last speaker of the day was Prof. H. M. Cottrell whose remarks, somewhat amplified, are given elsewhere in this paper. Kansas has no more thoughtful citizen than Professor Cottrell. His suggestions for management under the present unusual conditions will be read with profit by many thousands of farmers. His experience has been large and varied as a feeder, and as an experimenter at the agricultural college he has learned much that is especially applicable to the present emergencies.

BONE-DUST FOR CHINCH-BUGS.

The question of fertilizers has been discussed with more or less interest by some eastern Kansas farmers for several years. Experiments reported have been chiefly in the southeastern part of the State. The Iola Register of recent date gives accounts of two instances of profitable use of fertilizers on wheat. The first is the experience of Mr. J. Butler, of Allen County, who tried bone dust on white upland. The land is reported to be so thin that never yet has the crop, whatever it may have been, been worth gathering all over the eighty. Nineteen bushels of wheat to the acre is the very best he has ever been able to get from it. This year he threshed out 32 bushels to the acre, machine measure. He is confident that this is fully twice as much as he would have got if he had not used the bone dust, and he figures, therefore, that he made a good investment.

Mr. Butler used a Buckeye fertilizer-drill to sow his wheat—a machine which drills in the fertilizer right along with the wheat—and he thinks that is the only way to handle the bone dust economically and to the best advantage. He sowed about 175 pounds to the acre, at a cost of \$2 a hundred. He is so well pleased with the result, however, that he is going to order a car-load for use this fall.

"And there is one thing that I want you to say especially," said Mr. Butler in making this report to the Register, "and that is that the chinch-bugs do not damage the fertilized wheat. The bone dust has a horrible smell, and whether it is this or what it is I do not know; but the fact is that there were no bugs in my fertilized wheat."

A Mr. Stickney, also of Allen County, gave a similar experience. He spoke of a neighbor, whose field, adjoining his own, was entirely eaten up by the bugs, while his own wheat was not hurt at all.

If by sowing a few dollars worth of bone dust on an acre of ground one can get twice as big a crop and at the safe time insure it against the chinch-bugs, the "way out" from the depredations of the chinch-bug would seem to be blazed, graded, and paved.

A FARMER BOY'S SUCCESS.

The Kansas farmer boy is always coming to the front in whatever position he is placed. A Chicago dispatch dated July 20 reads as follows:

"A public test was given last night to a new system of wireless telegraphy. The inventors are Prof. Clarence E. Freeman, associated professor of electrical engineering at the Armour institute; Lee De Forest, a graduate of Yale, and Edwin H. Smythe, telephone engineer for the Western Electric Company. Professor Freeman is the inventor of the sender, while Messrs. De Forest and Smythe invented the receiver, or responder. The test was between Armour institute and Auditorium tower, a distance of four miles through the heart of the city. The instruments worked perfectly."

Professor Freeman referred to above grew up on a farm in Shawnee County, took the regular course at the Kansas State Agricultural College, carried his studies on for two years more at Manhattan and continued them further at Armour institute in Chicago. He was successively made a tutor, an instructor, a lecturer, and an associate professor in that great institution and is rising to still higher ground by dint of his everlasting persistence at his work. The world may expect to hear more from Professor Freeman.

Weeds and Drought.

EDITOR KANSAS FARMER:—One of your readers has written me asking me what I was doing through the drought. Well, I am working from 4 o'clock in the forenoon to 9 o'clock in the afternoon with a daily average temperature of 90 for the first twenty-one days of July, and a daily maximum of 104 degrees. There is no danger of getting wet or catching cold so I never have to take my coat to the field.

We had a backward spring, rather

above the average temperature for March with slightly less than normal rainfall.

April was 2.90° below the normal temperature, and 1.98 inches below the normal rainfall.

May was a scorcher, being 7.93° above normal temperature, and 1.24 inches below the normal rainfall. June was 4.24° above the normal temperature, and 4.15 inches below normal rainfall, while July is out of its banks, so to speak.

All crops here are destroyed beyond redemption, except possibly a few acres of late Kaffir-corn, which only a few farmers have. I have been on this farm thirty seasons and have never before seen a drought in June, but have always seen one in July and August, so I have all these years shaped my work so as to be prepared for a severe drought, or a near approach to a famine, and I trust I am as well prepared to stand one as the average farmer. I have hauled water for many years. After repeated experiments I have blasted two large stock wells down to permanent sheet water, which is in a layer of sandstone that crops out on the surface about 12 miles away. I have a water level in my wells of 18 feet below the surface, and have a great plenty of the purest of water. In spite of the awful drought, my pasture is good and the stock fattening every day.

This needs explanation and conveys a lesson, showing one of my plans to resist a great famine. I have always taken the very best of care of my pasture, never permitting it to be over stocked, and always keeping a few sheep that eat out all the weeds. Where there are no sheep kept the pastures are literally taken with weeds that are a deep green while the grass is all eaten out and dried up, showing that the weeds have drawn deeply on the fertility of the soil and the stored up moisture in the subsoil. These weeds are of no use to the stock. Just think of a man allowing rank weeds to grow in his crops and the enormous damage they would do in a famine year. Yet not one farmer in one hundred ever tries to kill them out of his pasture. Now does not common sense tell us that it is just as important to keep them out of our crop of grass in the pasture as out of other crops? Take every report to the crop service and you will see that the correspondent says pastures are ruined and that all weeds are killed out of the corn. They should have said that the weeds in the pastures have stolen all the stored up moisture and the grass has failed on that account, but the crop of weeds are the heaviest and best quality in the pastures. It is a positive fact that one of my neighbor's cows was forced to eat so much rag-weed to live that they could not eat the milk after it was frozen into ice cream. This is startling, but is true of half the pastures. The grass in my pasture is dried up in some places but it is 3 to 9 inches long, perfectly cured and readily eaten, while on all the low ground it is still green and growing slowly. I have never seen sheep fatten so well and so readily. They go into my acre of walnut trees about 10 o'clock and come out at 4 o'clock. They visit the water trough twice a day. The cows and horses also get into the shade at noon—the latter doing most of their feeding at night. It is worth going miles to see the two pastures on each side of my place in contrast with mine.

The whole difference is the weeds. I have heard farmers say they mow the weeds in their pastures. How foolish to grow a crop of weeds every year and then go to the trouble of cutting them and throwing them away, when sheep would have cut them and turned them into a large profit. This great drought has fully demonstrated that the farmer who allows a crop of weeds to grow in his pasture is just raising and throwing away a valuable crop. I will wager that every calamity howler in Kansas has a pasture bare of grass and 450 per cent. of it a weed crop. It is one of the mercys of a kind providence if a great drought will bring this fact before us. Never before could stock and sheep be bought so cheaply as at the present time and the farmer who does not secure a few, does not deserve any sympathy if his cattle starve to death. Get a few registered Shorthorns and see them improve your pasture. A five-wire fence with posts 10 feet apart is all that is necessary to keep them in.

My late Kaffir-corn and sorghum, and my mammoth soy-beans seem to stand the drought all right, also my cow-peas. My early Acme potatoes are all dug and made 50 bushels of small potatoes to the acre and I shall sow the patch to Siberian millet this week. The Carman are yet green with very small bottoms and when I dig them I shall sow to turnips. I shall plow some of my flax

stubble and drill in white beans and if they fail to mature seed, they will make 1 to 2 tons forage per acre. Shall have to cut up corn this week. I have been forced to buy a corn binder as with the railroad building through here it is impossible to get hands to cut it, and besides it is too short to be shocked by hand. The only hope we have left of corn is to secure the fodder in good shape and each farm may possibly raise enough to seed it again next year, but this is not certain yet—on the contrary it is exceedingly doubtful. If I raise one kernel to the acre, my corn thresher will take that kernel out for seed while cutting and shredding the fodder. There is room in the barns for a great deal of bound fodder and they will be stored full of it. J. C. NORTON.

Moran, Kan.

Save the Forests and Store the Floods.

GEORGE H. MAXWELL, EXECUTIVE CHAIRMAN OF THE NATIONAL IRRIGATION ASSOCIATION, BEFORE THE TRANSMISSISSIPPI COMMERCIAL CONGRESS AT CRIPPLE CREEK, COLORADO.

The twentieth century will be an era of mighty achievement, but none greater than the transformation of arid America from an uninhabitable waste into a fertile territory teeming with a dense and prosperous population.

As Secretary of the Interior, Hitchcock has said: "That this vast acreage, capable of sustaining and comfortably supporting, under a proper system of irrigation, a population of at least 50,000,000 people, should remain practically a desert, is not in harmony with the progressive spirit of the age or in keeping with the possibilities of the future."

The time is ripe for the accomplishment of this great national purpose. So long as there was an abundance of unoccupied government land open to homestead settlers which did not require irrigation to be productive, there was no reason why the nation should undertake the great work of the reclamation of the arid region.

But that time has gone by, and now we see thousands upon thousands of homeseekers gathering on the edge of the Kiowa reservation, waiting, not for a home on the land, but for the chance to draw lots for one. Many thousands of these would-be homebuilders will be turned back with bitter disappointment in their hearts. A few fortunate ones will possess the promised land.

And "Uncle Sam" has a hundred million acres left of his great farm which he can subdivide among his children, and give to every industrious man who wants a home on the land a chance to get it, for a generation yet to come, if congress will heed the demands of the people, and inaugurate a sound and sensible policy for the reclamation and settlement of the arid public domain.

The obstacles in the way are being rapidly overcome. The East, as the result of the persistent educational campaign which has been carried on by The National Irrigation Association for the last two years, is becoming thoroughly awakened to the gigantic possibilities of the increase of our national wealth and prosperity, the enlargement of the home market for our manufacturers, the opening up of opportunities for employment for our workers, and for homeseekers to get land, through the building by the national government of the great storage reservoirs and main-line canals which are necessary to bring the water within reach of settlers.

The people of the West, and the people of the whole country, have repudiated State cession, and will refuse to be led into the shoals and quicksands of any scheme which would turn the control of the solution of this great problem over to State politicians or State legislatures, or put any impediments in the way of the settler who desires to go upon the public land and build his home there.

Where can there be found a subject more fitted to arouse the enthusiasm and pride of every American citizen than the transformation of this vast region into happy and prosperous homes for many millions more of patriotic American citizens.

And if we are to accomplish this great result, we must take as the slogan of the movement, "Save the forests and store the floods." The preservation of the forests is of first importance. We must remember always the old Arab saying that "The tree is the mother of the fountain." With the experience of the past before us, we know that the destruction of the forests means the destruction of the water supplies, and not only present desolation, but hopeless aridity.

The forests are nature's storage res-

ervoirs. Without them artificial storage reservoirs will be useless. But if we will not only preserve the forests but also store the flood waters, that now go to waste, in great reservoirs where they can be utilized for irrigation, and for power for all industrial purposes, we can create in the western half of the United States an addition to our national wealth and resources which will double it. It is idle to talk of this great work being accomplished by private capital or private enterprise. It is a national problem just as much as were the dikes of Holland, or the great Nile dam, or the irrigation works of India. It is the creation of a country where there was none before.

For Late Fall Crops.

In Missouri as in Kansas the question of feed, especially rough feed for the stock, is commanding much attention. The following suggestions of Prof. H. J. Waters, dean of the Missouri Agricultural College, will be found applicable in all parts of the country where drought has cut short the forage supplies:

"The supply of feed can be largely increased by growing one or more forage crops which can be made to mature between now and frost, provided an average rainfall occurs from now on. Among the crops that may be sown now with a reasonable assurance of a fair crop, the following are suggested:

"The cow-pea, if sown at once on well prepared land, wheat or oat stubble that is broken, ought to make one or two tons of hay that excels clover in feeding value. This hay can be gotten off the ground in time to sow the land in wheat without another breaking, the surface being disked just ahead of the drill. Cow-peas improve the land, just as clover does, and makes a splendid preparation for wheat. The Whip-poor-will or New Era varieties are recommended, sown at the rate of a bushel per acre, either broadcast or, preferably, with a wheat drill. The hay is cured and handled about the same as clover. Cow-peas stand the heat and drought well.

"Sorghum is another drought and heat resisting crop, very productive, and will mature before frost if sown now on well prepared land at the rate of about a bushel of seed per acre. The Early Amber variety is preferred for this late sowing. The hay may be partially cured in the swath, and then made into large shocks to complete the curing process and stacked later. Unfortunately, the supply of sorghum and cow-pea seed is almost exhausted in our markets, owing to the large recent demand.

"Kaffir-corn is closely related to sorghum, and may be grown and handled in essentially the same way, with almost as satisfactory results, although it is not regarded as quite so good a hay plant. The markets still have a fair supply of this seed.

"Millet may be used quite successfully, and will stand considerable drought and much heat. The farmers are too familiar with this crop to need any advice concerning the methods of growing and harvesting it.

"Brown dourha, a plant closely related to sorghum and Kaffir-corn somewhat extensively used in the dry portions of Kansas, may be used if the seed of the others mentioned can not be gotten. It is not considered to be quite so productive and satisfactory, however.

"This about exhausts the range of profitable hay crops for the sowing. Crimson clover does not succeed well in this climate as a rule, and does not resist drought.

"Rape has been grown successfully for fall pasture in this State, but the experience with this plant for fall use is somewhat limited, and it is not considered so sure a crop as the hay crops just named. It is a cool weather plant, and requires a reasonable amount of moisture; but the spring sown rape has stood the drought and heat of the summer quite well on the college farm this year. Rape may be sown in the corn where the stand is not good, or where the growth has been seriously retarded by the drought, sowing at the rate of about two pounds per acre, and cover lightly. If sufficient rain comes to start it well, it will make a large amount of excellent pasture for sheep, hogs, and cattle, and will continue green until the ground freezes. Its greatest growth will occur after the corn is cut. Rape will do better, however, if sown alone, in which case three pounds of seed per acre should be used. Dwarf Essex is the best variety to use.

"A large area of rye and wheat should be sown as early as possible, for fall, winter and early spring pasture.

"Of course, it is understood that if the drought continues through July and August, all of the crops recommended for hay will fail, but in view of the great scarcity of feed, it will be well

worth the investment and risk to sow every available acre in something that will produce feed if it rains. It is hardly necessary to add that all the straw should be carefully saved for feed, that all the corn fodder should be preserved, and arrangements made to protect the stock against the winter storms, to make the feed go as far as possible.

"On land especially suited to this purpose, turnips would be worth sowing, for the farmer who expects to winter any considerable number of sheep. While in ordinary seasons this crop is not considered especially profitable except in a small way, yet in view of the great scarcity of feed, it will be well worth growing this year."

Odd Years for Sowing, Even Years for Reaping.

EDITOR KANSAS FARMER:—Commenting on my "Future by the Past" letter, in the last issue of your paper, you say: "Weather records do not verify such theory." Possibly not, but crop figures, as shown in Coburn's report, strengthen the report that it is better to plant largely in the odd year to reap successfully in the even year, if we are sowing fall grain. That was the thought that Brother Swann was endeavoring to impress upon his fellow farmers. In the even year we grow successfully in Kansas from the Missouri River to the Colorado line and our complete failures are on the odd years in this end of the State, with now and then an exception as in 1891 and 1895. I wish to inculcate Swan's theory as being good for western Kansas, because every now and then some postmaster or politician goes down to Topeka and, on being interviewed, asserts "western Kansas is only suited for cattle," when in fact the statistics prove that the soil is as good and the yield as fair as in other portions of the State, when planted on the parable year. "History repeats itself"—so does the seasons, especially in Kansas. We have had big crop years, phenomenal crops, and we will have them again. We have also had small crops, droughts, hot winds, and grasshoppers, but as a rule a good wheat year follows a drought. If the newspapers were competent to urge the farmers to "hold their wheat" a few years ago when prices were low, they ought to be equally anxious to advise them when to plant.

"In time of peace prepare for war" is a good suggestion, and in imitation of the wise saying let the Kansas farmer say—in time of drought prepare for another large wheat crop—even larger than the phenomenal crop of 1900. Newspapers, especially the dailies, are too much given to ridicule "weather prophets." Let us go down into Egypt and learn a lesson from Joseph. No doubt he was ridiculed by his neighbors but at any rate he continued to buy corn and his foresight was rewarded. The possibility of another drought during the latter part of next summer is foreshadowed, and another big wheat crop in 1902 would be a satisfaction to the Kansas farmer. F. R. FRENCH.
Lakin, Kans.

The Cause.

Circus Manager—What's all that row in the dressing room? Attendant—Oh, the man who walks barefoot on swords ran a splinter in his foot.—Ohio State Journal.

New Service to Texas

The evening train via the Santa Fe now leaves Topeka at 10.08 a. m. daily. Arrives Ft. Worth in only twenty-three hours; reaches San Antonio, Houston, and Galveston in only thirty-five hours.

Quicker and better than ever. Through Pullman and chair cars. Direct connection at San Antonio for Mexico.

Also morning service for same points.

Talk it over with T. L. KING, Agent, Topeka.

Santa Fe.

Horticulture.

Moth Catchers.

PRESS BULLETIN MISSOURI EXPERIMENT STATION.

There seems to be considerable misunderstanding concerning the moth catchers, which use light as the attracting agent, due almost entirely to the fact that the advocates of these traps have been and are still using many false and deceptive statements and methods for increasing the sale of their traps. There is also some misunderstanding in regard to the exact position which the experiment station takes concerning the use of said traps.

Over a year ago the inventor of the Haseltine moth catcher sent us one of his traps to test. We also made several other similar traps, using in some tin, in others mirrors, glass, and wire netting, in a manner like the original trap, so as to prevent insects from circling around the light. To all purposes these traps were identical with the original so far as efficiency in catching insects is concerned. We operated four traps, one of which was the original, in an apple orchard which had never been sprayed, and was badly infested with codling moths and other common apple orchard pests, continuously from the time the trees bloomed in the spring until late in the fall. We also operated traps in peach orchards, gardens and in the field. These tests were made, as all experiment station experiments are, with the sole purpose of determining the facts. A careful record of each day's catch was made, so that there could be no mistake in regard to the identity of the insects captured, or the number thereof. We wanted to ascertain just what insects were caught by the moth catchers during the season, and what ones were not caught. We published no articles either for or against moth catchers until after testing them thoroughly. The results of these experiments tally exactly with experiments that have been conducted by other stations, and there can be no doubt as to their accuracy.

We consider it our duty to notify the people of these results, in order that they may know exactly what insects the moth catchers will capture, and what they will not catch, even though claimed to be caught by the advocates of the traps.

The ordinary agriculturalist or horticulturalist can not make the insect determinations for himself, and since the moth catchers do catch an immense number of insects that are not recognized by the user, many people reach the conclusion that these insects are injurious ones, and better killed than left alive. We desire to be perfectly fair with those advocating the use of moth catchers, and at the same time be perfectly fair with those who are using them or intend to use them.

It should be distinctly understood that the moth catchers can not in any sense of the word take the place of sprays, in a general way. While the moth catcher is a good thing for certain very restricted insects at a certain very restricted time in the proper season of the year, and while it is true that sprays are to a certain extent unsatisfactory for certain insects, yet, on the whole, the spray may be relied upon, even though used by inexperienced persons; while the moth catchers can not be relied upon without a thorough knowledge of the exact time it should be used for each special case.

There is an element of danger in the use of moth catchers, which is not found in spraying. A person may spray plants or trees at times when the operation will do no particular good, yet no special harm is done.

But in the use of the moth catchers, unless they are used at the exact time and for the special purpose demanded, they will not only fail to kill the insects desired, but will actually do great harm by killing large numbers of beneficial insects, such as the Ichneumon flies, which do more good towards keeping injurious insects in check than all sprays, moth catchers, birds, or other artificial and natural means combined.

With this warning in mind, it should be understood that we do not condemn moth catchers for all purposes. Neither can we recommend them for all purposes. They are good in their place, but they have a very restricted place, and at all other times they should not be used at all, as they then become positively detrimental.

From our experiments with the moth catchers, conducted during the entire season last year and so far this year, we feel that the most we can possibly

do for them would be to recommend the moth catchers to the following people, and for the purposes mentioned only: To gardeners, as a means of killing or a help in fighting the following insects: June or May beetles, which are the adults of the common white grub, the pickle-worm moth, and the cut-worm moth. To farmers, for killing the corn or boll-worm moth, which makes the wormy ears of corn (and in the southern States enters cotton bolls), and as a possible help by killing some of the army-worm moths. To horticulturists, for the fruit leaf-roller, which is the common name, in Missouri, for the adult of a yellowish green worm, which this spring for the first time has been extremely numerous and destructive in eating the fruit of the apple, peach, pear, plum, cherry, and quince. The exact time at which these traps should be placed in the orchard for the purpose of capturing this pest will be stated in a bulletin on this insect, to appear as soon as the experiment is completed. The Tent-caterpillar moths are also captured in these traps.

While we can recommend the moth catcher for catching the adults of the above named insects only, let it be distinctly understood that we do not claim that the moth catcher is the best thing that can be used for combatting all of the above insects. But we can say, that the moth catcher is the best thing that can be used in large fields, for the corn-worm moth, for the fruit leaf-roller, for the pickle-worm moth, and for the June or May beetle. Let it be definitely understood then that we recommend the moth catcher for no other insects than those named, and that for the tent caterpillar, the army-worm and the cut-worm, there are other methods of fighting these insects that are much better.

We wish now to impress upon the people the fact that these moth catchers absolutely will not catch—except now and then one by mere accident—the following common injurious insects, which the advocates of the moth catchers claim are caught: The codling moth; Colorado potato beetle; plum curculio; gougers; flat and round-headed apple-tree borers; peach-tree borers; tomato-worm moth; squash bugs; canker worm moth; cabbage butterfly, adult of the common cabbage worm; bud-worm moth; "grape vine moth;" "current moth;" "slug moth;" strawberry rott-borer.

In using the traps for the insects just named, and for thousands of other injurious insects that we have not named, one not only does no good, but actually does a great amount of harm; in the first place by failing to catch the insects wanted, and in the second place, by killing immense numbers of Ichneumon flies and other beneficial parasitic and predaceous insects. Hence, for the various reasons given, the indiscriminate and ready use of moth catchers renders them unsafe, and it is for these reasons that trap lanterns of all kinds have justly been called "humbugs." In all our experiments in orchards with these moth catchers, we have captured only two codling moths and one round-headed apple-tree borer; we have taken no peach-tree borers, no flat-headed borers, and, with the exception of the tent-caterpillar and fruit leaf-roller, none of the other common injurious orchard insects.

Taking it all in all, our experiments show that the general use of moth catchers would be a detriment, especially in orchards, because of the fact that very few people indeed are able to recognize the pests which they wish to catch, and hence can not determine the proper time during which the traps should be run, they are not able to recognize the immense number of beneficial insects which are killed, to say nothing of the great number of insects of no economic importance either one way or the other, which are also caught in immense numbers, and, therefore, deceive people into the belief that the traps are doing good and should be run.

We do not think it necessary to enter into detail here to prove our statement that the above common injurious insects are not caught in trap lanterns. If any one doubts the matter, let him obtain the trap and make the tests for himself, and send the insects for determination to a competent entomologist. We feel that we have dealt fairly with both the moth catcher advocates and others who advise their use, and at the same time have dealt fairly with the people for whom the lanterns are intended.

Our experiments prove that the moth catchers are good for the very restricted purposes which we have mentioned; for some they are the best thing, and

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for others they are not; they prove that for the bulk of the injurious insects, especially in orchards, the traps are not only of no use, but are an actual detriment. We emphatically advise the public not to rely upon moth catchers to take the place of spraying. We know of no case where the moth catcher would be better than spraying when spraying will accomplish the desired end.

We wish it distinctly understood that we have not changed our opinion in regard to the use, abuse, or condemnation of moth catchers since we published our first article against them. We see the matter now exactly as we did then. Further experiments and observations and experiences have not altered our opinion of them. We have explained where the moth catchers can be used to advantage, and we have mentioned a very small part only of the places wherein they can not be expected to do good, but will actually do harm.

We have not been converted from opponents to supporters, neither do we advise the indiscriminate use of the moth catcher. We have never acted hastily in our condemnation of the traps and we still hold to every word that we have published in regard to them. We recommend the traps for what little they are useful for, and condemn them for the harm they will do and for the danger connected with their use. We condemn the false and deceptive methods, statements and misquotations that are being used to further the sales of the moth catchers. We approve of the action of many agricultural and horticultural papers in refusing to advertise the moth catchers just so long as these erroneous claims are made for them.

Taken as a whole then, the use of moth catchers by the general public will do more harm than good.

J. M. STEADMAN,
Entomologist of the Experiment Station, Columbia, Mo.

American Pomological Society Twenty-Seventh Biennial Session, Buffalo, N. Y., September, 12-13, 1901.

The details of the meeting of the American Pomological Society, which will be held in Buffalo, September 12 and 13, 1901, are rapidly being perfected and will soon be announced. The program contains the names of a number of the most prominent horticulturists of the United States and Canada, and is particularly rich in topics of practical importance to fruit growers. Among the subjects already arranged for are the following:

"A Comparison of Eastern and Pacific Coast Fruit Culture," by Prof. L. H. Bailey, Ithaca, N. Y.
"Orchard Renovation," by J. H. Hale, South Glastonbury, Conn.; to be discussed by R. S. Eaton, Wolfville, Nova Scotia; W. T. Macoun, Ottawa, Canada; and others.

"Quality and the Market," by C. W. Garfield, Grand Rapids, Mich.; to be discussed by S. D. Willard, Geneva, N. Y.; L. A. Goodman, Kansas City, Mo.; and others.

"Development and Needs of the Export Trade in North American Fruits," by L. Woolverton, Grimsby, Ontario; to be discussed by Prof. Geo. T. Powell, Briarcliff Manor, N. Y.; H. M. Dunlap, Savoy, Ill.; Henry E. Dosch, Hillsdale, Oreg., and others.

"Fermentation of Fruit Juices by Control Methods," by Prof. Wm. B. Alwood, Blacksburg, Va.

"Some Experiments in Orchard Treat-

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ment and the Results," by Prof. F. M. Webster, Wooster, Ohio.

"The Mango; Its Propagation and Culture," by Prof. E. Gale, Mangonia, Fla.
"Loquat Culture," by C. P. Taft, Orange, Cal.

"The Utilization of Culls in Commercial Orchards," by Judge F. Wellhouse, Fairmount, Kansas.

One evening will be devoted to a joint session with the National Bee Keepers' Association, during which the following topics will be discussed:

"Spraying Fruit Trees in Bloom," by Prof. S. A. Beach, Geneva, N. Y.

"Bees as Fertilizers of Flowers," by Prof. James Fletcher, Ottawa, Canada.

The discussion of these topics will be led by Mr. R. M. Kellogg, Three Rivers, Mich.

Other topics will be announced later and a detailed program mailed to all members of the society and delegates to the meeting, as well as to such persons interested as request it of the secretary.

Delegates have already been appointed by more than twenty State and Provincial horticultural societies, and the indications are very favorable for a large attendance.

The fruit exhibit of the society will be held in the Exposition Horticultural Building, space having been generously granted by the Exposition authorities. Exhibits entered for the Wilder medals of the society will also be eligible to exposition awards. Those contemplating the exhibition of fruits should make early application for space to the secretary. All persons interested in fruits and fruit culture are welcomed to membership.

Announcement of hotel rates, meeting place and other details will be made at an early day.

The officers of the society are: President, Chas. L. Watrous, Des Moines, Ia.; first vice president, Thos. Meehan, Germantown, Philadelphia, Pa.; secretary, Wm. A. Taylor, 55 Q street north-east, Washington, D. C.; treasurer, L. R. Taft, Agricultural College, Michigan; chairman executive committee, Chas. W. Garfield, Grand Rapids, Mich.

She who willingly lifts up the veil of her married life has profaned it from a sanctuary into a vulgar place.

In the Dairy.

Conducted by D. H. Otis, Professor of Dairy Husbandry, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

Pasturing Green Sorghum.

By the last of June the tame grass pasture at the Kansas Experiment Station had become so short and dry that the milch cows could not get even a maintenance ration from it. In an adjoining field was 13 acres of sorghum. About one-half of this (6 acres) was fenced off to furnish pasture for the 27 head of dairy cows, including two dry cows, and two head of yearling heifers. The cows were turned onto the sorghum July 1. For the first week the cows were given their fill of alfalfa hay before turning on the sorghum. The first day the cows were left on the sorghum just fifteen minutes, the second day thirty minutes, the third day forty-five minutes, and so on, increasing fifteen minutes per day until the time reached one hour and a half. Since then they have had free access to the field. After the first week the cows were fed no hay except what they would pick out of the racks in passing to and from the barn where they were milked and watered.

The college cows were turned on the green sorghum with a knowledge of the fact that under certain conditions and with certain animals growing sorghum would cause death. At first two men went with the cows to watch for the first symptoms of anything unusual and our state veterinarian was near by in case anything should happen. For seventeen days (up to the present writing) we have not experienced a particle of trouble. This does not mean that we may not nor does it mean that any one following the above method may not have trouble. Nevertheless, judging from our experience and the experience of others who have pastured sorghum successfully we are of the opinion that a great deal of the trouble that comes from so-called sorghum poisoning is the result of injudicious management. Cows are too often turned on sorghum with empty stomachs and they gorge themselves, or when first turned into a sorghum field they are left there for a day at a time.

So far the experience of the Kansas Experiment Station in pasturing sorghum is very satisfactory. On July 17 the dairy herd, with practically no alfalfa and after a terrific seige of hot weather and fierce flies, produced a total yield of only 4 pounds less milk than on July 1, when the herd was on tame grass pasture with all the alfalfa hay the cows would eat. This small field of about 6 acres, although severely pastured during the last seventeen days of extremely hot weather, gives every indication of lasting a month longer.

The other field of 7 acres has been reserved until the sorghum heads out, when the herd will be turned into it and a comparison made between young growing sorghum and headed sorghum as pasture for dairy cows. D. H. O.

A Ration With Straw for Roughness.

Mr. E. S. M., of Bristow, Kansas, writes: "Will cottonseed-meal, bran, and wheat or rye straw make a good ration for milk; if so how much will it require per head for each feed?"

While not ideal, a very good ration

can be had from wheat straw, bran, and cottonseed-meal in the following proportions for a day's ration per cow:

	Protein.	Carbohydrates.	Fat.
Twenty pounds wheat straw	.16	7.58	.1
Seven pounds bran	.86	2.59	.18
Four pounds cottonseed meal	1.48	.66	.50
Total	2.50	10.83	.78

A cow fed on this ration ought to give a good flow of milk. The amount of cottonseed-meal is a little large, although some dairymen use much larger quantities. If the cow shows any bad effects from its use the amount can be decreased, and if necessary the amount of bran increased. The objection to the above is the cost, but this objection applies to almost any ration this year. In feeding the dairy cow, especially when feed is high, it is well to keep an accurate account of the yield of milk and just as soon as the cow ceases to pay for her feed the amount of feed should be reduced. It stands to reason that a cow giving a small or medium yield of milk does not need the same amount of feed as a cow giving a large flow of milk. To succeed along dairy lines under present conditions it is necessary to study the individuality of the milch cow very carefully. D. H. O.

Cottonseed Hulls in Comparison with Bran and Alfalfa.

C. B. M., of Nortonville, Jefferson County, writes as follows: "With the present serious conditions, the farmers and feeders are turning their attention toward something for feed. The dealers are improving the opportunity and have ordered carloads of different kinds of feed stuff, among the rest, fifteen carloads of cottonseed hulls which will cost \$10 or more per ton. It seems to me that this is a pretty stiff price for that kind of feed. Alfalfa hay can be shipped in for \$12 to \$14 per ton, wheat bran will cost \$16 or over. What would the cottonseed hulls be worth in comparison with them?"

Figuring corn at 50 cents per bushel and bran at \$16 per ton, and calculating the value of the protein, the carbohydrates and the fat by the algebraic formula, as given in Cowgill's hand book on "Feeding Stuffs," we find the value of a pound of digestible protein to be 3.72 cents, a pound of carbohydrates .82 of a cent, and a pound of fat 1.44 cents. According to these figures the value of the digestible nutrients contained in each of the above named feeds would be as follows:

Corn	90 cents per cwt. or \$18.00 per ton
Bran	80 cents per cwt. or 16.00 per ton
Cottonseed hulls	31 cents per cwt. or 6.20 per ton
Alfalfa	72 cents per cwt. or 14.40 per ton

From these figures it will be noticed that alfalfa is selling at about its feeding value in comparison with corn and bran, but cottonseed hulls are selling at entirely too high a price. When alfalfa can be had for \$14 per ton a man can not afford to pay over \$6 for cottonseed hulls. The latter are very poor in protein, containing only .3 of 1 per cent while alfalfa has 10.6 per cent. In feeding cottonseed hulls the Tennessee Experiment Station found it advisable to feed as high as 15 pounds daily per 1,000 pounds of live weight. This experience, as well as the composition, indicates that cottonseed hulls are not a very concentrated feed and to get good results must be fed in large quantities. At \$10 or more per ton, this feed would be entirely too expensive to feed dairy cows. D. H. O.

The Upper Bearing of a Farm Separator.

There are somewhere between 70 and 80 farm separators in our territory, and the number is increasing daily. A few suggestions at this time regarding the upper bearings of these machines may not be found out of place.

The bowl is the part of the separator that separates the milk, and the upper bearing is that part of the separator that holds the bowl in place. This bearing in modern cream separators is made of "Phosphor-bronze," which is the finest combination of metals known for this purpose. Where this bearing metal is used it is practically impossible to have a bearing "set" or "weld." It is a wonderful metal and can be used for a long time, even without the use of oil. The bearing and the spindle will wear very slowly where no oil is used and where fairly well oiled it will last for years. The fact that the metal will stand considerable abuse has led to its being abused. The writer knows of machines in his territory where the upper bearing has had but a few drops of oil in six months' daily use. Now this is abuse and those parties who are

abusing their machines will soon find that the bearings wear loose, allowing the machine to jar, tremble, turn hard and become a general nuisance.

Oil is cheap, a dime for a quart—and when mixed with one-third kerosene (which we recommend) is still cheaper. No patron can afford to be careless in this particular as it is expensive to buy new bearings and spindles. We are asking that you be careful and put the blame where it belongs and not on the separator. A little care and attention given to a machine revolving 8,000 to 10,000 revolutions per minute, will add immensely to its life.—E. W. Curtis, in Patrons' Bulletin.

Save Your Hay.

In many sections of Kansas feed is a scarce and high-priced article, and prospects are that it will remain high for several months to come. When pastures are dry it is necessary to give to stock of all kinds, and especially the dairy cow, some extra feed. If this is not done the cow will dry up and it will be impossible to restore her to a normal flow of milk until she is again fresh. Alfalfa or clover hay are excellent for this purpose, but where hay is scarce the feeding of these crops would mean that the cow will go hungry next winter. Much of the early corn in Kansas has tasseled during the dry weather and will be practically worthless for grain. If this is cut for fodder at this time it will deteriorate greatly before using next winter. Green corn is relished by cows and causes a good flow of milk. The Kansas Experiment Station realized as high as \$22 an acre from green corn fed to milch cows. Now is the time to cut this corn and feed it green to the cows who will be able to utilize practically the whole plant. This will save the hay for next winter. With the prospect of \$12 to \$15 hay it behooves every farmer to save every particle of roughness on the farm in a way and at a time when he can get the largest possible amount of nutriment out of it. By all means keep up the flow of milk during the hot, dry weather, but do it with your green feed that will save the hay. The utilization of sorghum is discussed in another article. D. H. O.

"You people down here spent \$5,000 boring a hole in the ground for coal, didn't you?" asked the passenger who was walking up and down the station platform to stretch his legs while the engine was taking in a feed of coal and water. "Yes, sir," returned the hump-shouldered native sitting on a nail keg. "That's about the size of it." "And what have you got to show for it?" "Well, mister," said the native taking a fresh chew of Missouri plug, "we've still got the hole."—Chicago Tribune.

Kansas Fairs in 1901.

Following is a list of fairs to be held in Kansas in 1901, their dates, locations, and secretaries, as reported to the state board of agriculture and compiled by Secretary F. D. Coburn:

- Allen County Agricultural Society—C. H. Wheaton, secretary, Iola; September 10-13.
- Brown County Fair Association—G. W. Harrington, secretary, Hiawatha; September 17-20.
- Butler County Fair Association—H. M. Balch, secretary, Eldorado; October 8-11.
- Chautauqua County—Hewins Park and Fair Association—N. G. Marsh, secretary, Cedar Vale; September 25-28.
- Clay County Fair Association—E. E. Hoopes, secretary, Clay Center; October 8-11.
- Coffey County Fair Association—A. L. Hitchens, secretary, Burlington; September 10-13.
- Cowley County—Eastern Cowley Fair Association—J. M. Henderson, secretary, Burden; dates not yet chosen.
- Finney County Agricultural Society—D. A. Mims, secretary, Garden City; August 21-23.
- Franklin County Agricultural Society—D. C. McQuesten, secretary, Ottawa; September 17-20.
- Greeley County Fair Association—J. C. Newman, secretary, Tribune; September 6-7.
- Harvey County Agricultural Society—John C. Nicholson, secretary, Newton; September 24-27.
- Jackson County Agricultural and Fair Association—S. B. McGrew, secretary, Holton; September 24-27.
- Jefferson County Agricultural and Mechanical Association—Edwin Snyder, secretary, Oskaloosa; September 3-6.
- Jewell County Agricultural Fair Association—C. F. Horne, secretary, Mankato; September 17-20.
- Linn County Fair Association—Ed R. Smith, secretary, Mound City; dates not yet chosen.
- Marshall County—Frankfort Fair Association—J. D. Gregg, secretary, Frankfort; September 17-20.
- Miami County Agricultural and Mechanical Association—W. H. Bradbury, secretary, Paola; September 24-27.
- Montgomery County—Coffeyville Fair



and Park Association—R. Y. Kennedy, secretary, Coffeyville; August 13-17.
 Morris County Exposition Company—M. F. Amrine, secretary, Council Grove; September 24-27.
 Neosho County Fair Association—H. Lodge, secretary, Erie; August 27-30.
 Neosho County—Chanute Agricultural, Fair, Park and Driving Association—A. E. Timpane, secretary, Chanute; September 3-6.
 Ness County Agricultural Association—H. C. Taylor, secretary, Ness City; October 2-5.
 Norton County Agricultural Association—J. L. Miller, secretary, Norton; September 18-20.
 Osage County Fair Association—C. H. Curtis, secretary, Burlingame; September 3-6.
 Reno County—Central Kansas Agricultural Fair and Live Stock Association—Ed M. Moore, secretary, Hutchinson; September 2-6.
 Rice County Agricultural Association—G. Hawkins, secretary, Sterling; September 11-14.
 Riley County Agricultural Society—R. T. Worboys, secretary, Riley; September 24-26.
 Rooks County Fair Association—J. Q. Adams, secretary, Stockton; September 10-13.
 Saline County Agricultural, Horticultural and Mechanical Association—H. B. Wallace, secretary, Salina; September 17-20.
 Sedgwick County—Wichita State Fair Association—H. G. Toier, secretary, Wichita; October 1-4.
 Stafford County Fair Association—John W. Lill, secretary, St. John; August 23-30.
 Sumner County—Mulvane Agricultural Society—John A. Reed, secretary, Mulvane; September 27-28.
 Wilson County—Fredonia Agricultural Association—J. T. Cooper, secretary, Fredonia; August 20-23.

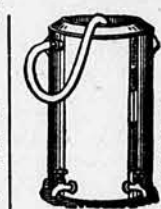
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 1400-2 Union Ave., CLOVERS
 KANSAS CITY, MO GRASS SEEDS.

SEEDS

The Poultry Yard.

Summer Care of Poultry.

It is best not to confine the young growing chicks in yards, but let them have free range. It is all right to confine the older fowls in roomy yards and let the growing chicks have all the free range to themselves. This is much the best plan, but farmers as a general thing do not do it, permitting all to run together. Young chicks have a very poor show when thus grown up among the old ones, and some method should be adopted to feed them away from the old flock. A yard should be made to feed them in and arranged to admit of the small chicks and exclude the full grown ones, and thus keep them separated at feeding time.

Plenty of shade is very essential in hot weather for the growth and health of chicks, and they should be well provided with quarters to keep them out of the rains and storms. A heavy rain on growing chicks will do them a great injury and check their growth; if it does not start roup in the flock. Roup in growing chicks is a fatal blow to the flock. While it may not kill many, it will stop their growth, and a runty, dwarfed flock will be the result. Heavy rains are conducive to roup, and the flock should be well protected from them. It is rather a difficult matter to get a lot of chicks all housed before a rain comes, but we can facilitate matters by having convenient arrangements made when storms are approaching.

Little chicks should never be let out in wet grass and weeds, and it is better to keep them shut up most of the day if not all of it, rather than let them out. It is no wonder that many complain of the loss of little chicks, considering the manner in which they pretend to take care of them. Frequently they are allowed to go out of their night quarters at will, not being closed up at night at all, and thus taken out on cool, wet mornings to trail around through the wet weeds and grass, which is sure to end in the loss of most if not all of the flock.

A. H. DUFF.

The Flavor of Eggs.

People who use many eggs and all who habitually eat them boiled know that there is much difference in the flavor of even these which are undeniably fresh, says a United States department of agricultural bulletin. There is a very general belief that the flavor is influenced by the feed which the hens receive, and that materials possessing strong flavors, like onions, turnips, etc., impart an injurious flavor to the eggs. The truth of this belief was shown by recent experiments at the North Carolina station.

Chopped wild onion tops and bulbs were fed to hens, and the length of time before there was a change in the flavor of the eggs was noted, as well as the length of time which must elapse after onion feeding was discontinued before the objectionable flavor would disappear. At the beginning of the trial a half-ounce of chopped onion tops per head daily was fed to twelve hens of different breeds. Repeated tests did not show any onion flavor in the eggs until the fifteenth day, when it was distinctly noticeable. The amount of onion fed was doubled for four days and then discontinued.

The eggs laid while the larger amount of onion was fed were so strongly flavored that they could not be used. After discontinuing the feeding of onions the flavor became less noticeable, and in a week the eggs were of normal flavor. The main point brought out by the tests was that flavor can be fed into eggs. Therefore it appears that to insure finely flavored eggs it is necessary to restrict runs so that no considerable amount of food which will produce badly flavored eggs can be obtained.

Some years ago the New York Cornell station in studying the effect of nitrogenous vs. carbonaceous food for poultry, reported observations on the effect of the different rations on the flavor of eggs. One lot of fowls were fed a mixture of wheat shorts, cottonseed-meal and skim-milk; another lot cracked corn and corn dough. The former ration contained much more nitrogen than the latter. The hens fed corn laid fewer eggs than those fed the nitrogenous ration, but the eggs were larger. The eggs produced by the nitrogenous ration were of a disagreeable flavor and smell, had a small yolk and did not keep well. The flesh of the poultry fed this ration, however, was darker, more succulent and tender than that of the fowls fed the carbonaceous ration.

These experiments also show that the food has a marked effect on the

flavor of eggs. The general experience of poultry raisers is that nitrogenous rations are more profitable for feed, since they produce a larger number of eggs. In view of the fact that such a ration, if too rich in nitrogen, may produce eggs of unpleasant flavor, it would seem advisable to note the effect of any ration fed upon flavor and modify it if the eggs are found to be inferior in this respect.

WEEKLY WEATHER CROP BULLETIN.

Weekly weather crop bulletin of the Kansas Weather Service, for the week ending July 25, 1901, prepared by T. B. Jennings, Station Director.

GENERAL CONDITIONS.

The high temperature has continued through the week with but little abatement, except locally from showers; it reached 111° at Independence on the 15th and 112° at Phillipsburg on the 16th. The 16th, 17th, and 18th were showery days in the eastern half of the State, with very good showers in some of the north-eastern counties (including the northern portion of Shawnee) and over a larger area in the south, the heaviest rainfall being reported from Wichita and was 3.16 inches.

RESULTS.

EASTERN DIVISION.

Corn is still green in Leavenworth and has improved considerably in Montgomery and Wilson. The early corn is suffering in Marshall and Nemaha and is being cut in Allen, and some in Anderson. Late corn is holding out very well and some is beginning to tassel. Flax cutting in Anderson and Osage but the crop is light. Pastures and prairie hay have greatly improved where good rains fell but outside of the rain districts pastures are brown, and in several counties feeding has begun. The third crop of alfalfa is ready to cut in Morris but it is a short crop.

Allen County.—Every hope of a crop is abandoned and all are cutting and curing fodder, and hauling water; stock being sent south to pasture.

Anderson.—Some corn cut for fodder, some will not make fodder worth cutting, while a little would make some grain with sufficient rains; flax being cut but few fields will make one-fourth crop.

Atchison.—Hope of raising any corn has

paring to sow sorghum and Kaffir-corn; some apples still hang on.

Riley.—Ground in good condition to plow in the central part.

Shawnee.—Early potatoes being dug, very poor; corn still green but small, early corn ruined except for fodder; apples light crop but promising.

Wilson.—Good rains; crops look much better.

Woodson.—The rains have improved the corn and the late hay; late corn is all right yet and just beginning to tassel.

Wyandotte.—No rain and nothing growing.

MIDDLE DIVISION.

The early corn is gone in Barber, Kingman, and Washington, and a failure in Lincoln. Some corn is being cut in Barber and Sumner; in Cloud it is practically ruined, is rapidly drying up in Dickinson and Phillips, will make good fodder but little corn in Reno, is showing effects of the drought in Harvey, will make not over one-half crop in Butler nor more than one-fourth crop in Smith, it promises to be a failure in Republic, and there is no hope for it in Rush. But the corn has been greatly benefited by rains in Cowley and Sedgwick. The late corn has been materially helped in Kingman and with good rains soon will make corn in Barber, Dickinson, Lincoln, and Washington.

Barber.—Early corn destroyed, late corn may make small crop; cutting corn to save fodder; oats a failure; rye short; trees dropping leaves; water supply getting short; wheat threshing progressing, yield good.

Barton.—Light showers benefited millet and forage crops; feed crop will be very short; plowing for wheat has begun where the showers soaked the ground.

Butler.—A few local showers in the north part, better showers in south; gardens dried up; alfalfa not starting since last cutting; corn can not make half crop; pastures dry enough to burn; no hay to mow; stock water scarce.

Cloud.—Wheat threshing continues; corn practically ruined; oats poor; pastures and gardens dried up.

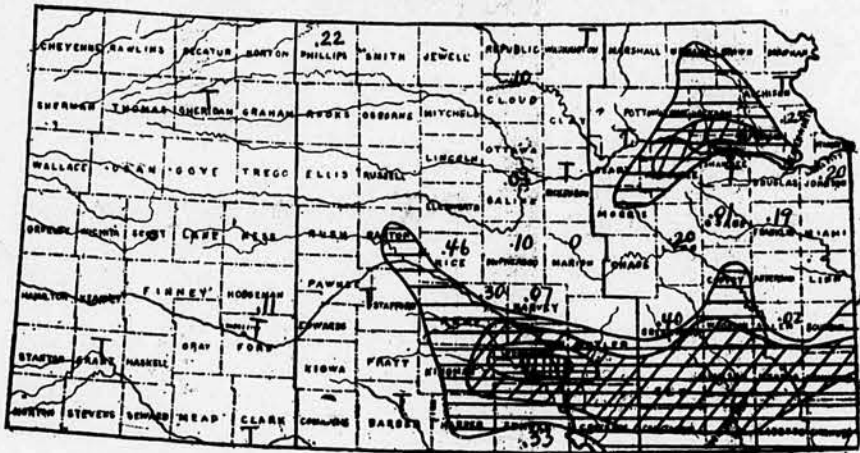
Cowley.—Three showers; corn greatly benefited, though the majority of it is past help; pastures revived and forage crops growing again.

Dickinson.—Corn, grass, and all other vegetation drying rapidly; rain would still help a few fields on bottoms.

Kingman.—Early corn gone; late corn materially helped by rains; fruit badly damaged.

Harper.—Showers interfered with threshing somewhat, but not heavy enough to benefit corn much—will hold it for a few days.

RAINFALL FOR WEEK ENDING JULY 20, 1901.



SCALE IN INCHES.

Less than 1/4. 1/4 to 1. 1 to 2. 2 to 3. Over 3. T, trace.

gone and the lateness of the season precludes hope of raising any forage crops.

Cherokee.—Corn, generally, is losing about 5 per cent per day and the best rains now would not make three-fourths of a crop; flax yielding 1 to 10 bushels per acre.

Coffey.—Two showers, but the continued hot weather is injuring the corn and fruit; peaches are not growing; some grapes are drying on the vines; many are hauling stock water, others are driving to water.

Crawford.—If rain and cooler weather come soon there will be fodder but the corn prospect is gone; peaches are drying up on the trees; apples are not growing; ground too dry and hard to plow for wheat.

Elk.—Kaffir-corn will yet make a crop if we have rain; will be very little corn.

Franklin.—Light to heavy showers in different parts of county; corn is holding well; some early corn in tassel burned.

Greenwood.—Corn and pastures needing more rain; prairie hay too short to cut; small patches of slough grass being cut for present demands.

Jackson.—A very hot week; good shower on 18th, did but little good; corn will not make grain now.

Leavenworth.—Corn still green; pastures brown; hay about one-fourth crop; stock water getting scarce; stock being fed.

Lyon.—Corn about one-half crop; apples fairly good; hay a fair crop.

Marshall.—Wheat turning out 27 to 32 bushels per acre; early corn about ruined; late corn damaged; many cattle put on feed; prairie hay and millet will be light crops.

Montgomery.—Good rains; ground wet deep enough to plow on stubble; pastures and corn very much improved; stock water improved some.

Morris.—Early corn damaged; some late corn still holding good color and growing well; third crop alfalfa ready to cut, a short crop; pastures dry, some feeding cattle; early apples dropping; late apples still holding well.

Nemaha.—Vegetation drying up; potatoes about dry and corn suffering, especially the earlier planted; too dry for plowing; fruit dropping or drying up.

Osage.—Crops in very bad condition; if it rains soon may have half a crop of corn; flax being cut, it is not very good.

Pottawatomie.—Still a show for corn on late, well cultivated fields on upland; pre-

Harvey.—Corn showing effects of drought; pastures drying up rapidly; beneficial showers in the east and south parts.

Jewell.—Pasture and water short; corn mostly tasseled and short with very few shocks—will not make good fodder unless it rains soon.

Lincoln.—Early corn tassel and will be a failure; late corn could still make a fair crop if it rains soon; pastures getting dry; all fruit is past help; some of the trees are dying.

Phillips.—Corn drying up; stock water becoming very scarce; pastures burned up; fruit drying on the trees.

Reno.—The rain revived all vegetation; threshing continues; wheat good in yield and quality; oats fair; corn looks better since the rain, will make good fodder but very little grain; potatoes and garden truck poor; early peaches abundant but not growing.

Republic.—Early corn will be an entire failure; late corn might make some crop if it rains this week; pastures drying up, wells falling.

Rice.—Threshing continues; the small rain was refreshing.

Rush.—Threshing progressing with yields of 8 to 15 bushels per acre, testing an average of 561 pounds; no hope for corn or forage crops; no potatoes or garden truck.

Russell.—Threatening rain with a few sprinkles the middle of the week.

Saline.—Some cloudiness and local showers Wednesday and Thursday affording a little relief; fruit hanging on well.

Sedgwick.—The generous showers have put new life in pasture and corn, and afford an opportunity to put in cane; it is believed corn will make over half a crop.

Smith.—Corn damaged badly, can not make over one-fourth crop; pastures drying up.

Stafford.—Grass drying up but stock looking well; threshing continues with good yields.

Sumner.—Light local showers; pastures dried up; some are cutting corn; threshing progressing.

Washington.—Early corn gone, late will make some corn if rain comes soon.

WESTERN DIVISION.

Early corn is about ruined as grain crop but will make fodder; late is holding out well though not growing much. The second crop of alfalfa is in stack in Gove,

POULTRY BREEDERS' DIRECTORY.

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TO EXCHANGE—Fine pedigreed Belgian hares, also some good unpedigreed stock, for good watch, bicycle, bone mill, or good Black Langshans. Give description and price of what you have. A. S. Parson, Garden City, Kans.

HENS Setting 6 days instead of 21, and how to make \$500 yearly with 12 hens. 45 Medals, etc., for Wonderful Discovery in horse manure heat. Particulars for stamp. Scientific Poultry Breeders' Association, K Masonic Temple, Chicago.

GEM POULTRY FARM—C. W. Peckham, Proprietor, Haven, Kans. Buff Plymouth Rocks, 2 flocks. Eggs from best flock \$2 per 15. A few choice Burdick cockerels for sale. Pea Comb W. Plymouth Rocks, 2 flocks. Eggs from best flock \$2 per 15. A few choice cockerels for sale. M. B. Turkeys, 2 grand flocks. Eggs \$2 per 11. Young toms for sale.

200-Egg Incubator for \$12.00
Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day.
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From Pure-Bred, High-Scoring, Prize-Winning, WHITE AND PLYMOUTH ROCKS BARRED... 18 for \$1; 30 for \$2; 50 for \$3; \$5 per 100. Recipe for making and using Liquid Lice Killer, 25 cents. Write for descriptive circular.
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STANDARD POULTRY.

Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Buff Cochins, Light Brahms, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, Brown Leghorns, and Belgian Hares. All Our Breeding Pens of this season at Bottom Prices, also Spring Chicks. Prices now less than half of winter prices. Fine Exhibition and Breeding Stock of Rare Quality. Write Me Your Wants. Circular Free.
A. H. DUFF, Larned, Kansas.

and being put up in Finney. The range grass has cured on the ground and cattle are doing well on it. Harvest is finished in Gove and Lane and nearly finished in Sheridan and Thomas, threshing has begun in Lane and Ness.

Clark.—Extreme heat and drought continue.

Decatur.—A good rain would still make a good deal of corn; nothing growing.

Finney.—Some local showers in county; cattle on range doing well; second crop alfalfa being put up, fair crop.

Ford.—Early corn gone; late corn still holding out and where planted deep looks first class but will have to have rain soon; prairie grass curing on the ground; stock in fine condition; peaches injured by hot, dry winds.

Gove.—Corn will have to have rain soon to save it; wheat harvest about completed; second crop alfalfa in stack; range grass fine for cattle.

Grant.—Stock doing fairly well; no apparent prospect of raising any feed for cattle.

Hodgeman.—Threshing begun, yielding 2 to 10 bushels; stock water low; grass cured; cattle doing well; lightning setting numerous fires; late corn and listed Kaffir looking well yet.

Kearny.—Most intense heat ever known here; everything suffering for rain.

Lane.—Harvest finished, threshing begun; pastures dry; all stock doing well; growing crops suffering for rain.

Ness.—Drought continues; some local showers; threshing continues; yield above the average, quality good; corn ruined; range grass cured on ground; feed crop in bad condition; prairie fires numerous, doing much damage to grain stacks and range grass.

Norton.—Late corn still holding on, early is practically ruined; chinch-bugs and grasshoppers are taking what the drought has spared so far.

Rawlins.—Everything slowly drying up; a good rain would save much corn and cane and make fall pasture; grasshoppers leaving in places.

Sheridan.—Wheat all harvested; early and late corn look a dark green color but the early tasseled will make no grain; if rain comes soon late corn will make grain, and most of the corn is late.

Thomas.—Harvesting nearly finished; all grain going into stack in fine condition; Kaffir and cane still standing the drought but growing very little.

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GEO. ERTEL CO., Quincy, Ill.

MARKET REPORTS.

Kansas City, July 22.—Cattle—Receipts, 23,410; calves, 299. The market was 10 to 25 cents lower. Representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include various cattle and sheep categories.

WESTERN STEERS. 21.....1106 5.05 | 23.....963 5.00

SOUTHWEST STEERS. 2.....445 2.00

TEXAS AND INDIAN STEERS. (Quarantine division.)

220.....1155 4.00 | 137.....860 3.40

TEXAS AND INDIAN COWS. (Quarantine division.)

22.....679 2.85 | 29 mix.....784 2.85

NATIVE HEIFERS. 22.....1038 4.75 | 2.....940 4.10

NATIVE COWS. 1.....840 4.25 | 2.....505 3.75

NATIVE STOCKERS. 23.....1069 2.75 | 1.....1240 3.50

STOCK COWS AND HEIFERS. 2.....415 2.60 | 2.....400 2.60

Hogs—Receipts, 6,288. The market was 5 cents lower. Representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include various hog categories.

Sheep—Receipts, 3,126. The market was steady. Representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include various sheep categories.

Chicago Live Stock.

Chicago, July 22.—Cattle—Receipts, 20,500. Good to prime steers, \$5.40@6.20;

Hogs—Receipts, 34,000. Mixed and butchers, \$5.00@6.00; bulk of sales, \$5.85@5.95.

Sheep—Receipts, 16,000. Good to choice wethers, \$3.90@4.50; western sheep, \$3.50@4.00; native lambs, \$3.10@5.00.

St. Louis Live Stock.

St. Louis, July 22.—Cattle—Receipts, 2,500. Native beef steers, \$4.15@5.65; stockers and feeders, \$2.50@4.10; Texas steers, \$3.40@4.40.

Hogs—Receipts, 3,000. Packers, \$5.75@5.90; butchers, \$5.90@6.15.

Sheep—Receipts, 600. Native muttons, \$2.50@3.30; lambs, \$3.75@4.40.

Omaha Live Stock.

Omaha, July 22.—Cattle—Receipts, 1,500. Native beef steers, \$4.25@5.85; western steers, \$4.00@4.85; Texas steers, \$3.50@4.40;

Hogs—Receipts, 4,300. Heavy, \$5.70@5.85; bulk of sales, \$5.65@5.70.

Sheep—Receipts, 5,000. Common and stock sheep, \$2.75@3.25; lambs, \$4.00@5.00.

Kansas City Grain.

Kansas City, July 22.—Wheat—Sales by sample on track:

Hard—No. 2, 67@68c; No. 3, 65@66½c.

Soft—No. 2, 66@67½c; No. 3, 65@66c.

Mixed Corn—No. 2, 62@63c; No. 3, 60½@61c.

White Corn—No. 2, 60½c; No. 3, 59@62c.

Mixed Oats—No. 2, 41c; No. 3, 40c.

White Oats—No. 2, 43c; No. 3, 42c.

Rye—No. 2, nominally 66c.

Prairie Hay—\$8.00@13.00; timothy, \$8.00@13.50; clover, \$12.00@13.00; alfalfa, \$12.00@14.00; straw, \$5.50@6.00.

Chicago Cash Grain.

Chicago, July 22.—Wheat—No. 2 red, 71½@72c; No. 3, 70@71c; No. 2 hard winter, 70½@70¾c;

Spring, 71½@72c; No. 2, 68@69c; No. 3, 65@68c.

Corn—No. 2, 57½@58c; No. 3, 56¼@56¾c.

Oats—No. 2, 40c; No. 3, 39c.

Futures: Wheat—July, 71¼c; September, 72½@72¾c; October, 73¼c.

Corn—July, 57¾c; September, 59½@59¾c.

Oats—July, 39c; September, 39¼c.

St. Louis Cash Grain.

St. Louis, July 22.—Wheat—No. 2 red cash, elevator, 68½c; track, 68@70c;

per four-basket crate; navy beans, \$2.25@2.30 bushel. Cabbage, \$2.00 per cwt. Onions, new, 90c@1.00 bu; cucumbers, \$1.00@2.00 per bushel crate.

Melons—Texas cantaloupes, per bushel crate, \$1.25@1.75; Arizona Khakis, \$3.00 per crate; watermelons, per dozen, \$1.00@3.50.

KEEVER GRAIN CO.

344 BOARD OF TRADE, KANSAS CITY, MO.

We Buy Eggs from Poultrymen and Farmers who properly care for their eggs, and have a case or more to ship each week.

J. H. PERRY, 1433 BLAKE STREET, DENVER, COLORADO. Established 1888. Reference, Colorado National Bank.

Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week.

FOR SALE—Ten high-grade yearling Red Polled bulls; also a few high-grade Red Polled cows and heifers, bred to a registered bull. Address I. W. Poulton, Medora, Reno County, Kans.

WANTED—I have good shading, fine, natural shelter, plenty of good running water, elegant pasture, and plenty of good feed, and help to care and provide for 10 to 20 head of cattle. I want from 10 to 20 registered Shorthorn cows, or 2-year-old heifers, with male; on shares, for 2 or 3 years. Here is a chance for "Drought Stricken Stockmen!" Investigate me and the capabilities. J. G. Mohler, Salina, Kans.

FOR SALE—At former prices, UJI Stoke Pogs 57621 A. J. C. C., dropped December 29, 1898; also Marie's Perfection 153052, dropped March 14, 1900, bred June 8. For prices and pedigree, address Edward Hunzicker, Colony, Kans.

CATTLE.

LEAVENWORTH COUNTY JACK FARM.—Seven mammoth jacks for sale. O. J. Corson, Potter, Kans.

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

HORSES AND MULES.

FOR SALE—400 acres of land—150 in cultivation, 250 under fence, 32 head of cattle, 7 horses, 300 chickens, good house and stables, plenty of water, 2 miles from town, cheap for cash. Mrs. W. Kleist, Oakley, Kans.

FOR SALE OR TRADE—160-acre farm—100 acres in cultivation; 6-room house, outbuildings, 3 miles from Florence, Kans., first-class spring water. Price \$16 per acre. For full particulars, write Jno. Fox, Jr., New Cambria, Kans.

FOR SALE—Thirty-two-acre farm only 3¼ miles from Topeka, all bottom land, 5 acres fine timber, pasture, living water, all well fenced, small new house. Price very cheap for location. Possession given in 30 days if desired. Present crop goes with farm. John G. Howard, 1107 West 8th Street, Topeka, Kans.

FARMS AND RANCHES.

FREE A book of statistics, information, and 200 E. Kans. farm descriptions. Write G. E. Winders Realty Co., Ottawa, Kans.

...MEN... Book for men only, explaining health and happiness sent free in plain envelope. Address CHICAGO MEDICAL INSTITUTE, 110 West Sixth Street, Topeka, Kansas.

When writing advertisers please mention Kansas Farmer.

SHEEP.

1,500 sheep and lambs for sale, in bunches to suit. H. W. Ottken, Oakley, Kans.

REGISTERED SHROPSHIRE—For sale. A choice lot of rams, lambs, and ewes, Kansas grown, at very reasonable prices. Olin Temple, Lawrence, Kans.

MISCELLANEOUS.

FARM DOGS—Scotch Collies ready to ship, from 2 to 4 months old, price \$4 to \$6, good stock, good individuals. A. P. Chacey, North Topeka, Kans.

WANTED—400 rods of second-hand hog wire. State condition and price. Box B, Sedan, Kans.

WANTED—Thirty bushels of alfalfa seed. Send lowest cash price to A. M. Mason, 206 West Euclid Ave., Pittsburg, Kans.

FOR SALE—Pure seed wheat and seed rye. Red Russian wheat (hard bearded), 80 cents per bushel; Fultz wheat (soft smooth), 90 cents per bushel; Red Cross wheat (soft smooth), \$1 per bushel; White seed rye, 85 cents per bushel. Sacked F. O. B. Lawrence. Samples sent on application. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

FOR SALE—Feed mills and scales. We have 2 No. 1 Blue Valley mills, one 600-pound platform scale, one family scale, and 15 Clover Leaf house scales, which we wish to close out cheap. Call on P. W. Griggs & Co., 208 West Sixth Street, Topeka, Kans.

FOR SALE CHEAP—Cocker Spaniel Pups. W. H. Richards, V. S., Emporia, Kans.

WANTED—Situation on a stock farm or ranch. Capable to take entire charge if required. Best of references. Box 25, Central City, Kans.

ITALIAN BEES....

Full colonies shipped any time during summer and safe arrival guaranteed. It will pay you to try my stock of Italian bees in the latest Improved Hives. Nothing will double in value quicker.

A. H. DUFF, Larned, Kansas.

SILBERMAN BROTHERS YOUR WOOL will pay you just in proportion as you are able to market it well and to your advantage. After having gone to all the trouble to produce good wool it would be a pity to fail in properly marketing it. We can relieve you of that trouble and annoyance and assure the success of your wool producing business. Ours is the Largest Wool House in the West. We have every best facility for grading, storing, packing, and we are always in intimate touch with the largest wool consumers in the country. We make liberal advances on consignments. Wool sacks free to our patrons. Write at once for our Wool Circular—gives latest prices and market conditions. SILBERMAN BROS., 122, 124, 126, 128 Michigan St., CHICAGO, ILL.

The Stray List.

For Week Ending July 4. Cherokee County—S. W. Swinney, Clerk.

HORSE—Taken up by E. C. Hutchison, in Shawnee tp., June 15, 1901, one bay horse, 9 years old, 5 feet 2 inches high, weight 1,200 pounds; valued at \$25. Also one bay mare, 7 years old, 5 feet high, weight 950 pounds; valued at \$65.

For Week Ending July 11. Cloud County—A. R. Moore, Clerk.

PONY—Taken up by A. R. Tucker, in Meredith tp., (P. O. Meredith), June 19, 1901, one roan mare pony, 12 years old, branded O I on left hip, and N 6 on left shoulder; valued at \$20.

For Week Ending July 25. Greeley County—Robt. Eadie, Clerk.

MARE—Taken up by C. M. Orr, in Tribune tp., (P. O. Horace), June 27, 1901, one bright bay mare, branded O C on left shoulder; valued at \$25. Greenwood County.

HORSE—Taken up by Wm. Booth, in Fall River tp., one (nearly) white horse, 12 years old, mane roached, shod all around, weight 900 pounds, branded X on right hip. Taken up July 10.

Pottawatomie County—A. P. Scritchfield, Clerk.

MARES—Taken up by M. Conidine, in Grant tp., (P. O. Havensville), July 6, 1901, two mares, 4 years old; one a light bay, star in forehead, and right hind foot white, branded Y on left shoulder; one a dark bay, branded Y on left shoulder.

RHEUMATISM

Nine years ago I was attacked by muscular and inflammatory rheumatism. I suffered as those who have it know, for over three years, and tried almost everything. Finally I found a remedy, that cured me completely and it has not returned. I have given it to a number who were terribly afflicted, and it effected a cure in every case. Any one desiring to give this precious remedy a trial, I will send it on receipt of 10 cents to pay cost of mailing. Address, Mark H. Jackson, 708 University Building, Mr. Jackson is responsible. Syracuse, New York. Above statement true.—Pub.

BRAND NEW STEEL ROOFING

Bought at Receiver's Sale. Sheets either flat, corrugated or "V" crimped. No tools except a hatchet or hammer is needed to lay the roofing. We furnish free with each order enough paint to cover and nails to lay. Price per square, \$1.75. A square means 100 square ft. Write for Free Catalogue No. 61 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

C. F. MENNINGER M. D., CONSULTING PHYSICIAN 727 KANSAS AVENUE, TOPEKA, KANSAS. Specialties: Chronic and Obsolete Diseases. Heart and Lungs.

Cattle, Sheep, and Hogs.

Owing to shortage in crops, I will sell a few registered red Bates Shorthorn cows or heifers, safe in calf to fine, registered bull, at famine prices. Will also sell registered Shropshire rams or ewes—nice ones—at reduced prices. Good April sows and boar Poland-China pigs at reasonable prices; also a few sows and gilts, bred for September and October farrow to Black Missouri Chief 25785, one of the best sons of Missouri's Black Chief 19399, and out of a sow from Chief Tecumseh 2d 9115, whose dam was by Kiever's Model, the great \$5,100 sire.

J. CLARENCE NORTON, Moran, Kansas.

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VIA SANTA FE, At Rates Lower Than Ever Before.

On Sale August 1 to 10 Inclusive, September 1 to 10 Inclusive.

Denver, Colorado Springs, and Pueblo and return, \$15.00

Glenwood Springs and return, \$25.00

Salt Lake City and Ogden, and return, \$30.00

July 10 to 31, and August 11 to 31, round trip tickets to same points as named above will be sold at one fare plus \$2 for the round trip.

A Pullman Observation Sleeper runs between Kansas City and Colorado Springs on Santa Fe trains Nos. 5 and 6. The observation end is for free use of all Pullman passengers.

For further particulars, rates and other dates or to other places, or for free copy of "A Colorado Summer," write to, or call on.....

T. L. KING, Agent, the Atchison, Topeka & Santa Fe Railway. TOPEKA, KANSAS.

Grange Department.

"For the good of our order, our country and mankind."

Conducted by E. W. Westgate, Master Kansas State Grange, Manhattan, Kans. to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

NATIONAL GRANGE.

Master.....Aaron Jones, South Bend, Ind.
Lecturer.....N. J. Bachelder, Concord, N. H.
Secretary.....John Trimble, 514 F St., Washington, D. C.

KANSAS STATE GRANGE.

Master.....E. W. Westgate, Manhattan.
Lecturer.....A. P. Pearson, McLouth.
Secretary.....Geo. Black, Olathe.

The following article, by Frank Porter, in the Farmers' Friend, is so applicable to the patrons in Kansas, that I wish all to read and consider it and wherever the words "Farmers Friend" occur read "Kansas Farmer."

The officers and members of the Kansas State Grange are not doing what they should to sustain the grange department in the Kansas Farmer, the opportunity for which was so freely tendered to us at the last meeting of the state grange. Brothers and sisters of all the granges in Kansas and especially of the state grange we need your assistance. Let us hear from you.

GOOD WORDS FROM A STALWART PATRON.

Should old acquaintances be forgotten and new ones be brought to mind? Since the Farmers' Friend has returned to its old-time moorings, with its weekly letters from a number of officers of the state grange and many of the members from different parts of the State, it brings to mind the days of Auld Lang Syne. What a pleasure it is to call to mind many noble kindhearted patrons we have met and the happy hours spent with them at the different grange meetings. Though many miles may separate some of us, yet all are near and dear to memory, as distance lends enchantment to the view; time creates a desire to renew and cement old friendship. What an opportunity the grange has afforded us to make acquaintances and cultivate true friendship. Friendship affords the greatest of all happiness; there is nothing greater, nothing grander than friendship, fellowship, sympathy, love, call it what you may, it's the thing that makes life worth living and doubtless the only thing that can make death worth dying. With the columns of the Farmer's Friend open to every member of the order to drop a word of kindness and encouragement to each other, how much life's pleasures can be multiplied.

Let us suppose there are 25,000 patrons in the State that read the Farmers' Friend, if each would express one thought, one word of encouragement, the rest would all be twenty-four thousand, nine hundred and ninety-nine times happier on account of it. With what a keen relish we enjoy reading the communications of other patrons, it is a real inspiration. Though we may never have met them, yet we have a deep interest in all that have taken the obligation and are willing to spend a little time to build up and encourage the grange family.

The state grange can't be always in session, nor can we all attend its meetings, but under present arrangements we could have a miniature state grange meeting every week in the Farmers' Friend.

The officers of the state grange have doubtless performed many good acts, but in my humble opinion they have never accomplished a greater service to the order than when they arranged to have a Grange Journal and especially under such favorable terms. Nor, is it a one-sided bargain? The benefits doubtless, will be mutual, it will increase the value of the Farmers' Friend as much as it will the order.

How much both could be improved if each one would put forth a little effort. Some of us are but parasites always ready to enjoy the productions of others, but not willing to do anything in return, yet I know it is a good deal of an undertaking for the average farmer to write an article for publication. The most of us would rather do a half day's work in the field than to undertake to write even a short article for the press. It is not that they do not have thoughts and ideas that would be of advantage to others, but fear that the bungling way of expressing thoughts will be an object of ridicule. But on this score none need hesitate, as all newspaper men are willing to spend sometime in correcting errors and putting facts and thoughts in readable shape, if they are only sent them. Let each member consider himself and herself, if not an associate editor, at least a reporter to send our paper facts and incidents that occur at grange

meetings and elsewhere, and thoughts that come to our mind. If each grange would send a monthly communication to the Farmers' Friend, no person can estimate the power it would be to build up the order. Fraternaly,
FRANK PORTER.

Montgomery, Pa.

"No Discussions."

Recent letters from many grange correspondents contain the above phrase. Now why is this thusly? To our mind it indicates a serious mistake some granges are making. Many granges omit discussions because the time is taken up with initiatory work; some because the lecturers do not attend to business; some because members refuse to take part. Let us look this matter squarely in the face. What is the grange for? One word answers that question—education. The grange lives and moves and has its being solely to educate farmers. How does it educate? In a score of ways. It educates because it organizes farmers and teaches the power of organization. It educates because it teaches fraternal fellowship. It educates because it trains to independence of judgment in public matters. It educates by merely bringing farmers together for a social time, breaking down prejudices, enlarging the views, giving breadth of charity. Its initiations properly conducted educate in many ways, impressing lessons of duty and privilege. Its business meetings educate by teaching parliamentary law and by training in brief, pointed speaking.

But if all these methods of education are practiced, but the lecture hour omitted, the grange is losing one of its greatest, if not its very greatest, means of advancing not only the growth of its own individual members but also the true interests of the farming class. Discussions are the life-blood of the grange. Cut out the lecture hour and you cut at the root of grange influence.

Let us have fine initiations, by all means. Let us have a strong social life in every grange. Let us buy together, sell together, enjoy life together, work together, plan together, for common aims and common interests. But above all let us talk together about those themes that enlighten the understanding, that give culture and breadth of view, and that concern the welfare of agriculture, our country, and mankind. Let every grange keep sacred one full hour, for its Lecturer, and let every lecturer realize her high privilege and duty.—Michigan Farmer.

New Granges.

The secretary of the National Grange reports that one mail of July 4 brought applications for six new granges, 2 from Michigan and 4 from Pennsylvania, as follows:

Grange 1197, organized June 28, Lackawanna county; Grange 1198, organized June 19, Lackawanna county; Grange 1199, organized July 1, Lackawanna county; Grange 1200, organized July 2, Lackawanna county. These granges were organized by Albert M. Cornell, deputy and lecturer of the state grange. The charter lists were all very large. We congratulate the order in Pennsylvania for having such an able deputy. Six new granges and three reorganized on the 4th, making since July 1, 8 new granges and three reorganized.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that can not be cured by Hall's Catarrh Cure.

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

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

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all druggists. Testimonials free.
Hall's Family Pills are the best.

A 43-PIECE DINNER SET FOR 25c.
Full sizes; beautiful flower decoration and rich gold bands. Write us at once and we will send a sample set. The Acme Supply Co.
P. O. Box 506 East Liverpool, O.

YOU NEVER CAN TELL
how soon you will need medicine. Get our Large Drug Book, keep it handy. Contains over 15,000 listed drugs, medicines, family remedies, toilet articles, etc. Mailed for 10c. We refund amount out of first order. "The Only Mail Order Drug House in the World." HELLER CHEMICAL CO., Dept. 47 Chicago, Ill.

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\$25 ON 5 TON IS WHAT YOU CAN SAVE We make all kinds of scales. Also B. B. Pumps and Windmills. BECKMAN BROS., DES MOINES, IOWA.

AMERICAN CORN AND FODDER SHOCK COMPRESSOR Best Pulley On Earth. HOLDS while you tie. Does not cut the rope. Strong, Simple, Durable. Write for Price List. J. B. Hughes, Greensburg, Ind.

ENSILAGE CUTTERS. THE ROSS ENSILAGE CUTTERS Have Proven Superior to all Others. THE E. W. ROSS CO., SPRINGFIELD, O. Send for Catalogue No. 49, which describes the full line.

Do you want a WIND MILL? Do you want a FEED MILL? We have them the best made and at prices that CAN NOT BE EQUALLED. Write for further information, circulars, etc. CURRIE WINDMILL CO., Topeka, Kans.

KIRKWOOD FOR 1900 STEEL WIND MILLS, STEEL TOWERS, PUMPS, and CYLINDERS, TANKS, and FITTINGS OF ALL KINDS. —Address— Kirkwood Wind Engine Co. Arkansas City, Kans.

CREAM SEPARATOR FREE This is a genuine offer made to introduce the Peoples Cream Separator in every neighborhood. It is the best and simplest in the world. We ask that you show it to your neighbors who have cows. Send your name and the name of the nearest freight office. Address PEOPLES SUPPLY CO., DEPT. X, KANSAS CITY, MO.

MIXED WIRE NAILS Each Keg contains 100 lbs. of new mixed wire nails from about 3 to 40 penny size. Order a Sample Keg. Write for Free Catalogue No. 61 on building material and supplies. CHICAGO HOUSE WRECKING CO. West Thirty-Fifth and Iron Streets, CHICAGO.

DO NOT BUY WELL DRILLING MACHINERY until you see our new Catalogue No. 41 We will furnish it to you FREE. Write to our address, either Harvey, Ill., Chicago, Ill., or Dallas, Texas. F. C. AUSTIN MFG. CO. Factories at Harvey, Ill.

WINTER WATER. When the stock goes into winter quarters you will want to be sure of a reliable and constant supply of water. A bored well is the safest and surest. Our Well Machinery does it best and cheapest. Drills 25 to 1500 ft deep. We make all appliances. Have stood the test of 13 years. We also have Gasoline Engines for all purposes. Send for free catalog. W. M. Thompson Co. Sioux City, Iowa. Successors to Sioux City Engine & Iron Works.

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WELL DRILLING Machines Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse power. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog. WILLIAMS BROS., Ithaca, N. Y.

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BULL-STRONG! FIG-TIGHT. An Illinois farmer said that after harvest he had fully 200 bushels of loose oats on the ground that he could not secure any benefit from, because the fence around the field would not turn hogs. Figure the loss for yourself. He also said, all this would have been saved if he had used the Kitzelman Woven Wire Coiled Spring Fence, and the value would have gone a long way towards paying cost of the fence. With the Duplex Machine any farmer can make it himself at the actual cost of the wire. Catalogue free for the asking. KITZELMAN BROS. Box 257. Muncie, Ind.

Cream Separator FREE In order to introduce in every neighborhood the best and cheapest Cream Separator ever manufactured we make you this liberal offer, asking you to show it to owners of cows living in your vicinity. Send today your name and the name of the nearest freight office. Write at once to ECONOMY MFG. CO., 174 W. 7th, Kansas City, Mo.

BEFORE BUYING PIPE write us for manufacturers prices, state quantity and size wanted. We save you money. CARROLL IRON WORKS, 767 Carroll Ave., Chicago, Ill.

\$100.00 REWARD. Dr. MANLEY'S SPAVIN REMEDY Has no equal for Ringbone, Spavin, Puffs, and All Bony Enlargements. Full instructions sent with each package. \$100 reward for any case this remedy fails to cure. Delivered to any Postoffice in the U. S. for price \$1.00. Prepared only by Dr. W. S. MANLEY D. V. S., Address 207 East 4th Street. Pittsburg, Kans.

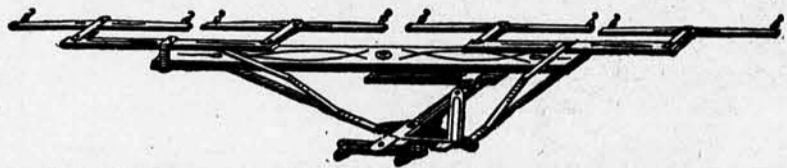
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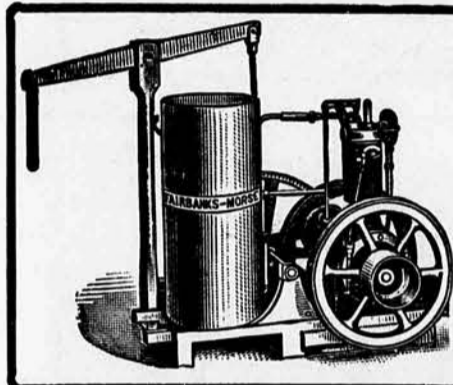
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who together can pump more water,
 grind more feed, shell more corn or
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LEAN'S ALL STEEL HARROWS & LAND ROLLERS

Spike Tooth Harrow. Lean harrows make fat harvests. They do more work and do it more efficiently than any other harrow. They tear up the ground, smooth it for sowing, harrow in the seed, kill the weeds after the crop comes up. The teeth are adjusted to suit any condition of the soil. By a touch of a lever they are instantly cleared of trash without stopping the team. The most substantial and finest finished farm implements made to-day. Made entirely of steel, light and durable. Both the spiked tooth and spring tooth harrow will save enough in a year to pay for itself.

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 One month's treatment by mail, 25 Cents.
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Is quickly relieved and promptly cured by **Dr. Drummond's Lightning Remedies**.
 The internal remedy is pleasant to take, acts immediately, does not disturb digestion, and is for rheumatism only in all its torturing forms. The external preparation restores stiff joints, draws cords, and hardened muscles. If your druggist has not these remedies in stock, do not take anything else: Send \$5 to the Drummond Medicine Co., New York, and the full treatment of two large bottles will be sent to your express address. Agents wanted.

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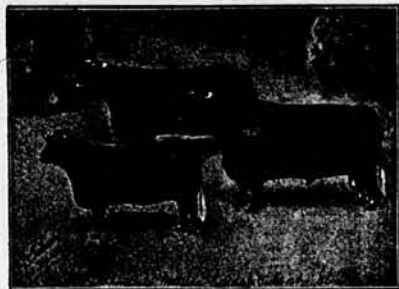
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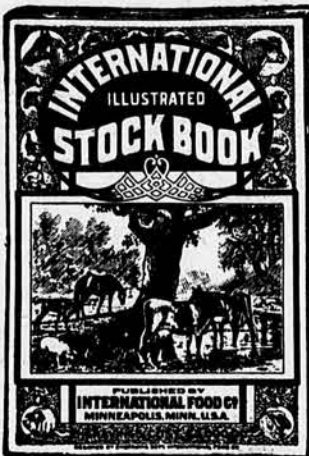
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