

KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, JUNE 27, 1901.

ESTABLISHED IN 1863.
\$1.00 A YEAR.

Breeders' Directory

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. Extra Good Fall Boars and Sows.
Fancy Strains.
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.

DUROC-JERSEY SWINE—REGISTERED.
Three extra fine males left: one September, and two October farrow. Prices away down to close out.
NEWTON BROS., Whiting, Kans.

CHERRY GROVE FARM DUROCS,
From best prize-winners. One spring boar, also fall and winter pigs for sale.

WARE & POCOE, Station B, St. Joseph, Mo.

D. L. BUTTON, 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.

Ridgeview Farm Herd of Large English Berkshires
Sold out of everything but fall pigs. Place your orders for them now. Silver Laced and White Wyandotte eggs for sale, \$1.50 per 15.
MANWAKING 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, or 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.

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.

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 hogs in the West, such as **Banner Boy 28441, Black Joe 28608, 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.

SWINE.

KANSAS HERD OF POLAND-CHINAS has some extra fine spring gilts, some January gilts, and sows 18 months, bred to Sen. I Know, he 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.**

A FEW POLAND-CHINA PIGS FOR SALE.
Fine individuals. "Chief I Know" and "Look Me Over" strains. **R. J. Conneway, Edna, 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.

Poland-China Hogs.
Herd headed by I Know Perfect 48263 O., sired by Chief I Know 37187 O. A few gilts for sale, also two 2-year-old sows that will be bred for August or September farrow and one 3-year-old sow by King Breckenridge. **W. E. NICHOLS, Sedgwick, 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 7363, and others. A few male pigs of March and April farrow. S. C. B. Leghorn eggs.

MAPLE GROVE HERD OF REGISTERED POLAND-CHINAS.
HIRAM SMITH, Colwich, Sedgwick Co., Kans.
Headed by the grand boars Black Chief 42367, Ideal U. S. 48259, and assisted by Perfect I Am Vol. XXIII, grandson of Perfect I Know 19172, granddam the great sow Anderson's Model 48611, mated to a lot of choice selected sows of the most noted prize-winning families. A fine lot of fall pigs ready to ship. Inspection or correspondence invited.

Prospect Park Herd of Thoroughbred Poland-China Hogs
Perfect We Know, a son of Chief I Know, the sweepstakes boar at the Omaha Exposition, at head of herd.
J. H. TAYLOR,
Telephone address Pearl, Kans. **RHINEHART, KANSAS.**

Pure Bred Poland-Chinas
I have 25 choice October pigs that I will sell for \$10 and \$12.50 for the next 30 days, sired by Corwin I Know 18448, and Hadley U. S. 20186; dams equally as well bred, all good colors. I am also booking orders for choice spring pigs sired by Logan Chief 2d 24427, and Proud Tecumseh 24655. My hogs have good heads, small fancy ears. Come and see them or write.
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.

ROSEDALE HERD OF HOLSTEINS.
C. F. STONE, PROPRIETOR, PEABODY, KANS.
Home of Empress Josephine 3d, champion cow of the world. Gerben's Mechtchilde Prince at head of herd. Young bulls and heifers for sale.

RED POLLED CATTLE
LARGEST HERD IN AMERICA.
S. A. CONVERSE, PROPRIETOR, IMPORTER and BREEDER, CRESCO, HOWARD CO., IOWA.

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.

CATTLE.

POLLED DURHAMS 10 bulls from 6 to 30 months. A few females. All stock recorded free in two records. Correspond at once before too late. **A. E. BURLEIGH, Knox City, Knox Co., Mo.**

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. **\$7 150 Fine Duroc-Jersey Pigs. F. F. FAILOR, Newton, Iowa.**

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.**

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, \$2.
O. B. WHITAKER, Proprietor, Shady Bend, Kansas.

Norwood Shorthorns. **V. R. ELLIS Gardner, Kans.**
Sir Charming 4th at head of herd. Crutckshank top crosses on best American families. Young stock for sale.

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.

ROCKY HILL SHORTHORNS.
Herd headed by Sempstress Valentine 157069, son of St. Valentine 21014, and Mayor 129229, grandson of Imp. Salamis and Lord Mayor. Young bulls for sale.
J. F. TRUE & SON, Newman, Kans.

Shorthorns and Poland-Chinas.
Two good bulls, Scotch-topped, 7 and 11 months old. A good lot of fall boars, and young sows bred for September farrow. Prompt response to inquirers.
O. E. MORSE & SONS, Mound City, Kans.

Breed the Horns off by using a RED POLLED BULL.
CHAS. FOSTER & SON, FOSTER, Butler Co. Kas.
Breeders of Red Polled Cattle, Herd Headed by Powerful 4582. Pure-bred and grades for sale. Also prize-winning Light Brahmas.

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.

Recorded Hereford Bulls FOR SALE.
The get of Marmion 66646 and Anxiety Wilton A-45611, 10 to 24 months old. These bulls are large, and good individuals, and of the best of breeding. Inspection invited.
Fred. Cowman, Lost Springs, Kans.
Breeder (not dealer) of Hereford Cattle.

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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, Mechtchilde 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.

CATTLE.

A. D. SEARS & BROS., - - Leon, Iowa. SHORTHORNS.
2d Grand Duke of Hazelhurst 150091 heads the herd.

HEREFORD BULLS FOR SALE.
Five registered bulls, choicely bred, their sires being Lincoln 47085 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.**

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.

ALLEDALE 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 Alledale, near Iola and La Harpe, Allen Co., Kans., and address Thos S. Anderson, Manager, there; or **ANDERSON & FINDLAY, Prop's, Lake Forest, Ill.**

Silver Creek Herd SHORTHORN CATTLE.
GWENDOLINE'S PRINCE 130913 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.

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 Sanspareils. Young bulls for sale.
A. M. ASHCRAFT, Atchison, Kans. R. F. D. No. 3.
Inquire at 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, Elderdale, Chase Co., Kans.**

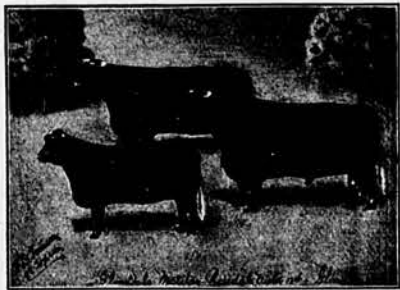
SUNFLOWER HERD SCOTCH AND SCOTCH-TOPPED SHORTHORN CATTLE, POLAND-CHINA SWINE.
Herd Bull, Sir Knight 124403. Herd Boars, Black U. S. 2d 25582 S, and Sunflower Black Chief 23603. Representative stock for sale.
ADDRESS **ANDREW PRINGLE, Rural Route 2, Eskridge, Kans.**

TO SHEEP BREEDERS.
First edition Stewart's "DOMESTIC SHEEP" sold out. Second edition, revised and enlarged, now ready. 384 pages boiled down sheep and wool knowledge, covering every department of sheep life. Acknowledged everywhere as the best book ever published on the subject. Used as a text-book in Agricultural Colleges. Publisher's price, \$1.50. In club with Kansas Farmer for one year, \$2.
Address, **KANSAS FARMER CO., Topeka, Kans.**

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

H. R. LITTLE,
 HOPE, DICKINSON CO., KANS.
 BREEDS ONLY
The Best, Pure-Bred
SHORTHORN CATTLE.

Herd numbers 135, headed by ROYAL
 Crown 12898, a pure Cruickshank, as-
 sisted by Sharon Lavender 14302.
FOR SALE JUST NOW 16 BULLS
 of serviceable age, and 12 bull
 calves. Farm 1 1/2 miles from town.
 Can ship on Mo. Pac., R. I., or Santa
 Fe. Foundation stock selected from
 three of the great herds of Ohio.



GLENDALE SHORTHORNS, OTTAWA, KANS.
 Leading Scotch and Scotch-topped American families
 compose the herd, headed by the Cruickshank bull
 Scotland's Charm 12724, by Imp. Lavender Lad, dam
 by Imp. Baron Cruickshank. Twenty bulls for sale.
C. F. WOLFE & SON, Proprietors.

LIVE STOCK AUCTIONEERS.
R. E. EDMONSON, late of Lexington, Ky., and Tat
 tersall's (of Chicago, limited), now located at 208
 Sheldley Building, Kansas City, Mo., offers his service
 as Live Stock Auctioneer. All the Herd and Stu
 books. Wire before fixing dates.
CAREY M. JONES,
Live Stock Auctioneer.
 Davenport, Iowa. Have an extended acquaintance
 among stock breeders. Terms reasonable. Write be-
 fore claiming date. Office, Hotel Downs.

R. L. HARRIMAN,
Live Stock Auctioneer
 Bunceon, Mo.
SALES made everywhere.
 Thoroughly posted and up-to-
 date on breeding quality and
 values. Have a large ac-
 quaintance among and am
 selling for the best breeders
 in the country. Terms low. Write for dates.

LIVE- STOCK AUCTIONEER
Col. J. N. HARSHBERGER
 Lawrence, Kansas.
 Special attention given
 to selling all kinds of ped-
 gree stock, also large sales
 of graded stock. Terms
 reasonable. Correspond-
 ence solicited. Mention
 KANSAS FARMER.

JAMES W. SPARKS,
Live-Stock Auctioneer,
 MARSHALL, MO.
 Sales made anywhere.
 Have been and am now
 booked for the best sales of
 high-class stock held in
 America. Thoroughly posted
 on pedigrees and individual
 merit. Large acquaintance
 among the leading stock-
 breeders of America. Terms
 reasonable. Write me before
 claiming your date.

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

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 93682, FRISCOE 93674, FULTON ADAMS 11th 83731. HESIOD 29th 66304
 Twenty-five miles south of Kansas City on Frisco, Fort Scott & Memphis, and K. C., P. & G. Railroads

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.
G. 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

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!
Our Record Last Year
 Six First Prizes at the Iowa State Fair.
 Seven First Prizes at the Ohio State Fair.
 Every possible First Prize, except one, at the
 great Paris Exposition.
 We have already bought a better lot of horses
 in France this year than we imported last year.
 The number we will import will be larger than
 will be brought from France by all of our com-
 petitors combined, and will be far superior in
 quality.
 If you want the best Percheron or French Coach Stallions at
 lowest prices, call on or write,
McLAUGHLIN BROTHERS,
 6th and Wesley Ave. Columbus, Ohio.



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

GALLOWAYS.
 LARGEST HERD OF REGISTERED GALLOWAYS IN THE WORLD.
 Bulls and females, all ages for sale—no grades. - - Carload lots a specialty.
M. R. PLATT, Kansas City, Mo. OFFICE AT PLATT'S BARN,
 1613 GENESSEE STREET.

GALLOWAYS.
 Largest Herd of Registered Galloways in Kansas.
 Young bulls, cows, and helpers 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.**

GEO. W. NULL, Odessa, Mo., LIVE STOCK AUCTIONEER.
 Have sold for, and am booking sales for leading stockmen everywhere. Write me before claiming dates.
 I also have Poland-China Swine, Bronze turkeys, B. P. Rock, and Light Brahma chickens.
 150 birds, and a lot of pigs ready to ship. Write for Free Catalogue.

WHEN WRITING ADVERTISERS MENTION KANSAS FARMER.

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 helpers 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**

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 13872 bred by Chas. E. Leonard.
 FEMALES are the best CRUICKSHANK families topped from the leading importations and Ameri-
 can 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 in-
 vite 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.

Agricultural Matters.

To Beet Sugar Through Difficulties.

At a sugar beet meeting, at Fremont, Nebraska, Mr. R. M. Allen, president of the Nebraska Sugar Association and vice president of the Standard Beet Sugar Co., at Ames, made the following statements in the course of an address:

"It is not worth while to repeat the story of all the things that have gone wrong in sugar production in this state, but it may be valuable to understand our conditions of to-day, and to enquire whether there is any good reason why we should not stand a little further up toward the head of the class.

On some points an argument that might be introduced by this paper is already forestalled by the paper on the climate and soil of Nebraska. In '96, '97 and '98 the results in beet culture were very satisfactory, and the yield of sugar in the factory also. In '99 and 1900 we have been so damaged by an excessive rainfall in August and September that our position in sugar production has distinctly declined—at least relatively. I do not believe there is any adequate reason why this should be so, and for the future I am confident of an improvement. The situation of to-day is distinctly worse than before the Standard factory was constructed, because beet growers—in what we all believe to be a district of unusual fertility—have suffered from leaf blight, insects, and a general indescribable injury to the beet crop through excessive moisture. The rainfall in August, '99, was the largest, rainfall in August on record at Fremont—9.78 inches; that of August, 1900, was the next largest—6.37 inches—with the single exception of the year 1884, when the rainfall was 6.73. Adding August and September together, we have a rainfall at Fremont in 1899 of 10.39 inches; and in 1900 of 11.18, it being heavier in each of these two years than in any year except 1884, when it reached 12.04.

"If it were necessary to look forward to a continuation of such seasons as those of the last two, with excessive rainfall in August and September, I believe I should "throw up the sponge" at once and abandon any further attempt at producing sugar in this State, as neither I nor any other sensible, hard-working persons can afford to waste valuable time upon something that can not be done. But you will, of course, admit that it is not necessary to look forward to a very frequent recurrence of seasons like the last two. It is very likely also that if the excessive rainfall of August, '99, had not followed so rainy months as those of May and June of that year that it would have been less destructive, as the rainfall of September was very light—only .61 of an inch. Also, I believe that the rainfall of August and September, 1900, 6.37 and 4.81 inches, respectively, would not have been so injurious had not the year previous been so wet. I believe that the water content of the earth under the surface has been in excess of the normal for the last 2 years.

"I trust that this statement is not too full of figures to be easily understood, and that my meaning is clear; that our conditions for the last 2 years, to say the least, have been very unusual, and without tabulating figures at all I know very well that I have never seen such conditions before since I have lived here.

"It is a great piece of work to build a sugar factory and to get it finally into thoroughly good running order. I suppose no factory was ever built that proceeded evenly, with perfect operation, from the day of starting, and unfortunately ours has been no exception to this rule. It has, however, passed through its period of probation, and is prepared to operate to its capacity. Not that it has reached a point where it may be left without further improvement, however. There is no doubt that changes and improvements will take place in the future. We hope to secure a supply of purer water for some purposes; also to increase our capacity when the volume of beet growing shall justify. Another point of importance in this immediate district is that we have accomplished much valuable drainage, the completion of the system marking a wide difference between the time anterior to the construction of the Central ditch and the future that will come after it. While this drainage will not accomplish all that is desired for the country east of Fremont, it will help, as I am assured by persons who have farmed for many years in that vicinity that the drainage up the valley in the case of each new ditch has had

a marked effect on the moisture of land east of Fremont.

"I dare say that some one is to blame for this combination of bad seasons, unfinished factory, leaf blight, butterflies, etc., that have vexed us the last 2 years, but it is difficult to fix the responsibility, and in the case of the seasons we shall have to give it up altogether. It is deplorable that beet growers have suffered such ill luck, and I speak with an entirely sympathetic heart, as I am sure that no one has suffered more than I have.

"I wish every citizen of Nebraska who is in any way a friend of sugar production here could visit some district at home or abroad where the industry is in thoroughly successful operation in order that he might gain more faith in our future success here; and also acquire an adequate idea of its value."

In this connection some observations made by Mr. Herbert Myrick, in a book published by him in 1899, for the purpose of promoting the American Sugar industry, may prove interesting. In discussing the economic side of the subject on pages 7 and 8 of his elegant book, Mr. Myrick says:

"The inability of the domestic grower of beets and cane, and of the manufacture of sugar therefrom to compete with the tropics (at least for many years) is shown by the following comparative exhibit, based on official data and gold values:

	United States.	West Indies.	East Indies.	Hawaii.
Yield of sugar per acre, tons.....	1 1/4	2 1/2	2 1/2	4
Cost of sugar per ton.....	\$75	\$40	\$20	\$35

"This is a fair mean under average conditions, though the yield for the United States may be criticised as too high and the cost as too low. On the other hand, experts will claim that the tropics can produce more sugar per acre and at less cost.

"Quite likely the latter is true, or only on this basis can an explanation be found for the momentous increase in imports into the United States or sugar produced by the yellow races—from 250,000 tons in 1892 to 600,000 tons per year. And this while Cuba's industry was almost prostrated by war!

"In Egypt alone, over \$50,000,000 have been invested in cane sugar houses and plantations within the past few years, mostly English money, at vast profit, owing to cheap fellah labor and great productiveness of soil under irrigation. Vast projects for further extensions are under way in Egypt and other parts of Africa."

"The enormous profits in the Sandwich Islands are due in part to the marvelous productivity of Hawaiian plantations. The Ewa boasts of having produced an average of 8 1/2 tons of raw sugar per acre in 1896, or 4 times the largest yield ever reported from Louisiana cane or California beets. Reports of the Ewa, Hutchinson, and other plantations give the cost of production at from 1 1/2 to 2 cents per pound, compared with 3 and 4 cents as the cost of making raw sugar from cane in Louisiana, or beets in California or New York after the industry is well established. The enormous increase in the Hawaiian industry, the immense plantations that are being developed, and the preparations now on to double and triple the sugar output of those islands, are now matters of common notoriety, that have already caused a saturnalia of speculation.

"Cuba has practically unlimited possibilities for sugar production. Porto Rico, though comparatively small in area, can, on a conservative estimate, produce almost as much as the present total yearly production of sugar in the United States. The Philippines possess sugar potentialities of unknown extent."

Farmers' Mutual Telephone.

Greene County, Mo., has the only Farmers' Mutual Telephone Association, systematically and equitably organized and operated, in the state, perhaps in the country, says a correspondent of the "Globe-Democrat." The plan is so simple and inexpensive that it will doubtless become as popular in other sections as it is here.

It was the result of an unforeseen incident connected with the construction of a line originally intended as a means of communication between canning factories. The line, which was built by Messrs. Wade and Wallace, of Republic, in the west end of Greene County, was granted the courtesy of exchange by the Interurban Telephone Company, whose lines cover a large portion of the southwest. The connection was valuable and the owners of a short rural line sought to take advantage

of it by stringing their wires on Wade and Wallace's poles to a similar connection with the Interurban.

When the free use of their poles was refused by Wade and Wallace, the rural people built their own line, but refused a number of farmers who wanted telephone connection, and who offered to build and maintain each their own part of the line, the free use of their exchange. The proposition was then made to Wade. There were 5 of these farmers within a distance of 5 miles, and they were promptly told by Mr. Wade that if each would build a mile of line in accordance with the company's specifications, and keep it in good repair, they would be given the free use of their exchange. That offer was gladly accepted, and the farmers were soon connected.

The plan worked so well that the 10 miles of canning factory line of less than a year ago has grown to more than a hundred miles, will soon be 200 miles, and will in the near future connect the farmers of the great southwest not only with each other, but with all its villages, towns and cities as well. The cost is trifling and, when the benefits are considered, is unworthy of notice. Almost every farmer can furnish his own poles out of his own timber and can prepare and set them himself. It will cost him in cash for 1 mile of wire, stringing it for a telephone and putting it in, about \$12, as your correspondent was informed by Mr. T. W. Wade, the head of the Farmers' Mutual Telephone Association. After the mile of line is built and in operation the farmer is at no further expense except for repairs. There is probably no other instance in the business world where so much of value is given at so small a cost.

For the purpose of securing the best service one phone is permitted to each mile of line, and each member of the association is required to build and maintain 1 mile of line. But other farmers in the vicinity are allowed to string an additional wire on the same poles by paying a fair portion of their original cost.

These owners of a mile of line each have organized an association, with the usual complement of officers, upon the basis of 1 vote for each mile of line, the value being fixed at \$20. The owner of more than 1 mile is entitled to as many votes as he owns miles. Originally the builder of 1 mile of line could only use the canning factory system of 10 miles, while those who build now secure a system of over a hundred additional miles, embracing Springfield and nearly all the towns in its neighborhood. A free phone over such a

system is a very valuable inducement, and the rapidity of its growth attests the appreciation of the people.

The results of such a system of intercommunication can hardly be estimated. For all the purposes for which communication is deemed essential, either for business or pleasure, it consolidates the people of a large section of the state into one family. That it will promote business and social intercourse can not be doubted. Combinations among the farmers for the purpose of promoting or protecting their own interests, and which have heretofore been found difficult or impossible, may become easily practicable. Students of social science will watch its progress with interest.

Greatness of Agriculture.

EXCERPT FROM AN ADDRESS BY L. H. KER RICK AT ILLINOIS COLLEGE OF AGRICULTURE.

Agriculture is the peculiar science; in its beginning simple indeed—simplest of all; in its higher development we shall see it growing complex, comprehensive, drawing to its aid, assimilating and rendering subservient all sciences and becoming in its fullest development the Master Science. Since the children of men, however simple and unlearned, must live and maintain themselves on the earth, and since they could not live only upon the products of the tilled field, it was necessary that they be able to provide the means of sustaining life by the simplest methods of field culture. The kind Providence which cares for all living things so ordered His laws that the field by rude and simple means could be made to yield the necessities of life. But since we live by agriculture, we have been wont to look upon it simply as a means of living. He who finds in his vocation only the means of living becomes a joyless drudge and his vocation stagnant drudgery. May we not see in this the reason why myriads have tired of farming and have turned away from the farm to other pursuits and professions? And in this turning away of so many from the farm, to other pursuits and professions, may we not find and see the cause of that marvelous development of other arts and sciences which so distinguishes our time? I do not doubt it. The excessive interest in these, the excessive number engaged in them, and the excess of energy expended upon them, could have no other result, than to push their development to an amazing degree of perfection.

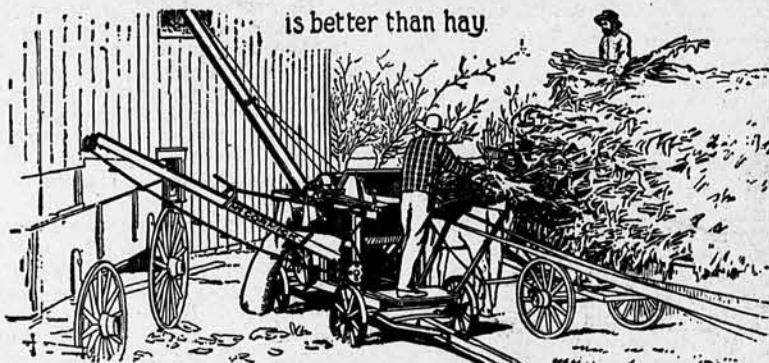
But now on every hand we see the signs of another turning, a returning to agricultural pursuits. Other sciences

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The M^cCORMICK HUSKER and SHREDDER shucks the ears and separates them from the stalks, and converts both the fodder and stalks into stover which is better than hay.



DOUBLE THE VALUE OF YOUR CORN CROP.

Write for "King Corn" a beautiful illustrated catalogue - all about corn machines

B. L. REES, General Agent, Topeka, Kans.

and other arts are ripe now to serve their highest purpose in the development of the master science, agriculture. The professions are full-crowded as we have seen. They no longer pay to put it short, but that is not all, nor most important: men and women conscious of power to aid in the world's needed work and inspired by sublime desire and ambition to add by their labors something to the world's comfort, happiness and betterment, disdain to waste their powers where not needed. We see that if place, success and competence are to be gained for themselves, in professional life, it must too often come by displacing and defeating others.

With the condition of the unskilled laborer and the artisan in the city we are familiar. Living employment is uncertain; there are too many. The mechanic, for self-preservation, is compelled to limit the number of apprentices in his craft, even to the exclusion of his own son. Professional men are hesitating to bring up their sons to their calling. How is it with trade and commerce? There is war between individuals and corporations for trade, of which there is not enough to go around; and nations that once fought for liberty and honor are now ready to fight for trade.

The way out of it all is, to the farm. To the farm is the place to go now, and to the farm is the thing to do. People see it; not only plain men now, but schooled, educated, learned men see it and the more they know the better they see it. Necessity may be the ointment that is opening their eyes, but they see it all the same. When questioned by my young friends from the schools as to what field for effort is now most promising, I answer, the cornfield. To the half employed, to the disappointed, discontented, striving, struggling millions in other overcrowded pursuits, agriculture says, "Come unto me and I will give you employment; I will give you food and clothing; I will give you homes; I will give you contentment and honor; I will give you peace."

But we are returning to a new agriculture, lighted and glorified by science. To the new agriculture the agricultural college will be the main gate-way. The agricultural college and experiment station is one of the wisest conceptions of this or any age. It should not be regarded as merely a help to agriculture or an aid, however valuable; such an estimate falls far short of the truth. It is a necessary, an indispensable agent in the development of a better and more profitable and more engaging agriculture. The farmer can not experiment profitably. Agricultural experiments for the most part require some years for their completion. There must be parallel experiments under varying conditions. Exact records must be preserved. Expensive apparatus is often required. I need not recount the obstacles to successful experimentation by individual farmers; they are numerous and practically insurmountable. If for no other reason, a college or association of some kind is necessary, because experiments if left dependent upon the life and health and inclination of private persons, would almost certainly fail. Although comparatively new institutions, colleges of agriculture have abundantly proved their value. The railroad is not more to transportation than the agricultural college and experiment station will be to agriculture.

There is but one opinion among those acquainted with their work; they must be maintained. Any farmer and all farmers who will watch the work done in these institutions and who will apply to their own work what may be applicable, will soon become their enthusiastic friends. A reasonable amount of public money judiciously expended in one agricultural college will return a hundred fold to the common good. A wise public policy will surely give liberal support to the agricultural college and experiment station.

We are met here to dedicate this great building, the largest agricultural college building, I believe, in the world. It is consistent—we are the greatest agricultural community, and this building stands in the center of the largest tract of the most productive land comprised in any single State. It will be well equipped. We have here a corps of instructors, many of them already renowned for eminent services to agriculture, all are learned and skilled in the art, and devoted to it. To the great art—the greatest, we dedicate this splendid building.

Improves the Grade of Corn.

FROM AMERICAN ELEVATOR AND GRAIN TRADE.

After five years' labor, Dr. George Cyril Hopkins, of the University of Illinois, has succeeded in greatly improving the chemical composition of the corn kernel. The experiment is regarded as one of the most important or its kind ever undertaken. The full result will be reported by Dr. Hopkins within a few weeks, in a bulletin to come from the Champaign Experiment Station. During the five years the experiment has been in progress Dr. Hopkins has gathered a vast amount of data which prove beyond a doubt that the composition of corn can be markedly changed by proper breeding. From corn containing an average per cent of protein, or real food portion, and oil, in 1896, the doctor has produced corn of much higher protein and oil content, and other corn much lower in both these components. A piece of ground designated "the high protein plot" was planted in corn of 10.92 per cent protein in 1896, and in 1900, by annually planting selected seed, the average of the crop harvested was 12.32 per cent protein. In the "low protein plot" the content descended from 10.92 to 9.34 by the same process of selection. Similar results were obtained in the oil plots. Both were planted with corn containing 4.70 per cent of oil, and the one raised a crop in 1900 of 6.12 per cent oil and the other 3.59 per cent.

The benefits of Dr. Hopkins' experiments can scarcely be overestimated. Were the improvements made in the oil content carried over the state it would mean \$800,000 increase annually in the value of the Illinois corn crop. [Estimated only on the portion of the crop sold to glucose and starch works.] Corn oil is the most valuable product of the cereal, it selling at five cents a pound. The improved variety raised by Dr. Hopkins contains 4-10 of a pound more than ordinary corn, and 20,000,000 bushels are bought annually by glucose factories, where the advance in price is made gladly for corn rich in oil.

Speaking of the demand for different kinds of corn for different purposes, Dr. Hopkins said: "For general feeding purposes corn with a higher protein content is needed. For use in the various factories and distilleries, where starch and glucose are manufactured and where the corn oil is extracted, corn containing a higher percentage of starch and oil is needed."

"For the production of the higher grades of pork it is absolutely necessary that we have corn which contains less oil than is found in ordinary corn. Both Germany and Canada are now substituting large quantities of other grains for American corn in pork production because it is too rich in oil."

"Of course a mere beginning in this work has been made. It must be extended and advanced till these scientific principles which have been discussed and demonstrated become agricultural practices, till we shall produce different kinds of corn for feed and factory as we now produce different kinds of cattle for beef and milk."

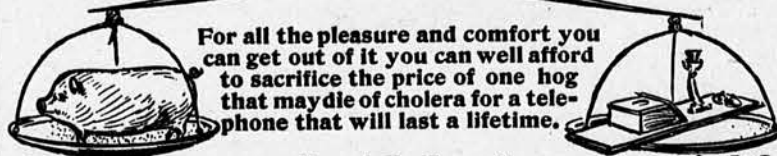
Clover Notes.

EDITOR KANSAS FARMER:—I have just finished moving the weeds off of a field of red clover, and think I have learned the way to get a stand of clover without fail. The ground was plowed last summer, the latter part of August. The first of the following March, I harrowed the ground thoroughly, making it in excellent tilth. I sowed the seed with an ordinary endgate seeder, at the rate of a bushel to 6 acres, and followed with a John Deere harrow, teeth well slanted, covering lightly as possible. Every seed seemed to grow, and the stand is excellent. My uncle, who has grown clover in southern Illinois for fifty years, says it is too thick. He may be right, but too good a stand of red clover in Kansas is unusual. While the ground was not very foul a good many weeds, mostly on western Spanish needles, without the needles, came up with the clover. I have mowed them off and left the clover with a steady growth and fine color. These hot June days (and the ground is very dry) do not wilt it, but seem to make it grow. If this clover had been sowed with wheat or oats it would have been weakly, spindling stuff that the hot sun would kill in three days after the grain is cut, and I would say, as many do, "it is very difficult to get a stand of clover in Kansas." If the weeds grow again I will mow again, but I think now, from the way the clover is growing, it will "head off the weeds," and will make some fine grazing for the Red Polls in September and October, and then be ready for a fine crop of hay followed by

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a crop of seed next summer. I think now I will never again attempt to get a stand of clover by sowing with a crop of wheat or oats.

Beulah-land Farm. WILKIE BLAIR.

Dangerous Weeds.

The encroachment of dangerous weeds on farm fields in many sections has become alarming. In early spring fields may be seen completely covered with wild mustard (brassica arvensis) bloom, looking like a solid sheet of yellow. Every other growth is completely crowded out. Later on, other fields become white with the bloom of the pestiferous daisy. Then there is the pernicious horse nettle, sometimes called sand briar (solanum carolinense), with its bluish-white or blue potato-like flowers, which are the forerunners of a good harvest of greenish-yellow globular seed receptacles. The Canada thistle is another invader of a dangerous character. Any of these weeds appearing on the farm, vigilant warfare should be followed until they are completely subdued. Too many farmers are too indifferent to the dangerous character of these and other weeds. It is much better to lose a little time when the weed pests first put in an appearance than later on to be compelled in defense of crops to spend a great deal of time and labor in trying to get rid of the evil of a vigorous start of a pestiferous weed. Roadsides are a prolific source for the distribution of noxious weeds on adjoining farms. Along the line of railways is also another source. From the latter place are many new weeds introduced by the sifting out of dirt from the passing freight cars. In this way weeds unknown to the community spring into existence and often become quite widely disseminated before their dangerous character is even suspected. Whenever a farmer discovers a plant unknown to him he should send a specimen of it, leaves and bloom, to the Agricultural Department at Washington for identification. In that way he may be informed in time if the plant is a pernicious one and at once destroy it on sight. Where fields have become infested with weeds such as described, probably the quickest and only successful method to get rid of them is to put such fields into crops that will require thorough cultivation. It will be necessary to have such crops for two or three years, then the fields may be seeded down with wheat or rye in the fall and grass seed sowed later on in early spring. There are many other weeds that can be very properly classed as of a dangerous character. The farmer who looks upon all weeds as enemies to growing crops, and aims to destroy them, is following the only plan to secure weedless fields. Weeds not only are unsightly, but they rob the growing crops of plant food and occupy the space that crops of value can much better fill. Weeds in the meadow lessen the value of the hay either for selling or feeding on the farm. Weeds in pasture fields in time run out the desirable grasses and clover, because the stock will eat all around them. Then when the pasture becomes short the cattle will partake of the weeds, to the injury of the flavor of the milk and butter. It can readily be understood that weeds do damage on the farm in various ways.—Baltimore Weekly Sun.

Wind Power.

Wind-power is doubtless the cheapest for pumping water on the farm. Few sections in agricultural America can be found where wind sufficient for pumping is lacking. Modern wind-wheels do not require gales for their operation, and with ordinary care troughs and tanks can generally be kept filled. At times the wheels may become becalmed and stock go thirsty. If danger of this kind is anticipated, the farmer should be all the more careful to put in an ample storage capacity. It is folly to economize in the size of the tanks and troughs when there is a chance of the wind failing for any length of time. As a matter of fact, in most sections there is apt at seasons to come a calm that may last a week at a time or more, and such times on largely-stocked farms tax the capacity of the tanks. An adequate supply of water in most sections can be secured by the use of windmills and storage-tanks of good capacity. A little intelligent attention to the wheel, to take advantage of the breeze, will enable the farmer thus equipped to provide water liberally for all purposes. On a number of large stock-farms dependence has not been placed in the wind, but deep driven wells have been equipped with pump and engine. This may be necessary where large stocks are carried and in sections east of the Missouri, where prairie breezes are not almost constantly on the blow; but the farmer west of that river can keep his troughs and tanks full by wind-power, and the average farm can in almost all cases be amply supplied by wind-power if tanks of reasonable size are supplied. When the wind is reasonably reliable these wind-powers can be used for almost any operation on the farm that requires a moderate amount of power. Feed-mills, corn-shellers, hay-cutters, and wood-saws may be run, and in those sections where the breezes blow freely the farmer may cheaply harness a very valuable power. But in the large establishments, where no chances can be taken and where heavy work is required, the gasoline engine has come into the greatest favor. The first cost may seem somewhat high to some farmers, but they are certainly money savers when in operation. They are quickly put at work, they require no skilled engineer, they are safe, and they are effective. In putting in such a power the farmer should study well his needs, present and prospective, and order an engine sufficiently large for all purposes.—Breeders' Gazette.

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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.
 December 10, 11 and 12, 1901—Armour-Funkhouser, Herefords, Kansas City.
 December 13, 1901—H. C. Duncan, Shorthorns, Kansas City.
 January 28 to 31, 1902, for Sotham's Annual Criterion Sale, at Kansas City.
 March 25-27, 1902—National Hereford Exchange, Chicago, Ill.
 April 22-24, 1902—National Hereford Exchange, Kansas City, Mo.
 May 27-29, 1902—National Hereford Exchange, Omaha, Neb.
 June 24-26, 1902—National Hereford Exchange, Chicago, Ill.

The Ideal Form or Type of the Coming Poland-China.

W. M. McFADDEN BEFORE THE IOWA SWINE BREEDERS.

The ideal form of the future Poland-China will be such as is best suited to the conditions under which the future hog is kept. It follows, then, that the important point to settle is, what are the conditions under which the future hog will be bred, fed and marketed? Many of us can well remember when the Poland-China was a large, coarse hog, nearly half white. There is little doubt that this type of hog was the one best suited to the conditions existing thirty or more years ago. Most of the hogs were eighteen months to two years old when marketed. A slow-maturing hog that attained great size was quite profitable under the conditions of care and management then given them.

But the conditions changed, and that type of hogs was not best suited to the new conditions, and we saw a radical and comparatively rapid change to the black, neat, well-finished, quick-maturing hog. Not very many of the hogs now marketed are twelve months old, and more and more the quick, forcing methods are being adopted. We certainly have today a type of hog that is much better suited to the uses he is put to, than the hog of thirty years ago would be for the same treatment. To hear and read what is being and has been lately said, about more bone and size, one would almost be convinced that a change in type is necessary and is about to take place. We might readily conclude that we are about to go back to the type of forty years ago, but the cold facts are we have a number of breeders who deliberately make a "grand stand play" in the shape of advocating the big coarse kind, who really do not think them the best, and in fact do not try to breed them. If I dared to do so I could name several breeders who talk and write of the need for more size and bone, who do it for advertising purposes alone. Some of them have admitted to me privately that such was the case, and others demonstrate that it is so, by the way they price pigs and hold on to something that has plenty of quality. I have noted scores of breeders who began the business with the idea that size was the main thing necessary to look out for, and after getting a crop or two of pigs which at six months of age were coarse, unfinished, and nearly unsalable, either quit the business in disgust or profited by their experience and bred a little different type—one that they could sell. It appears to be a popular fad with a number of breeders who can not quite win in the best of company, to give as a reason for not winning, that only the little, fine boned hogs can win. This is an excuse that sounds well, and so serves the purpose admirably. It is quite necessary that a breeder, badly disappointed in the show ring, shall have some convenient and plausible way to tell how it happened.

While I do not wish to be understood as saying that premiums are not sometimes given to quality at the expense of real merit, yet I believe that in the main they are placed where they encourage the type of hog that is best suited to present conditions. Some of the hue and cry we hear for more size and bone comes from those who really think we need it, but a surprisingly large amount of it comes from those who are not sincere in what they say, and who do not practice what they preach. To encourage quality is not necessarily to throw away size. I will admit that that is the tendency unless it is closely watched, but this combining of size and quality is what marks the successful breeder.

In all lines of live stock the tendency

is more and more toward early maturing, and it is to the type of hog best suited for that purpose that we should give encouragement. I believe, as a rule we are doing so. This type is as far removed from the little under-sized fine-boned kind, as it is from the big, coarse fellow. Intensive rather than extensive farming is the tendency, and the hog bred for quality and early maturity is most surely to be the hog of the future.

To hear some people talk we might conclude that we could discard the judge in awarding premiums, and use the tape line to measure the size of the leg, and then weigh the animal, to determine which is the best or biggest. But this type of hog is not the best for the present, and will be even less desirable for the future. There is no reason why we should not retain all the size necessary, and combine with it the quality that will make Twentieth Century Poland-China the typical and favorite hog of his day.

DISCUSSION.

Mr. T. J. Kegley, of Ames—Mr. President, I would like to ask the gentleman a question. While I heartily agree with him as to the type of hog he mentions, is it not true that a great deal of care and discretion has to be used upon that line in order to keep up the number of our litters?

Mr. McFadden—Answering from my own experience I would pretty near want to say no to that. I thought of that point when I was writing my paper, but I did not speak of it. I have an idea that all of the good brood sows and all of the sows that raise the big litters are by no means found among the big kind, and my own experience in raising hogs is that I could get large litters from medium sized sows if I watched for particular families and from my own experience they raise enough pigs, and the kind that I could sell better than these big lop eared fellows where the ears come over the eyes so that you could not drive them anywhere if you wanted to. While to a certain extent it may be true that you could more readily find a sow that would raise a large litter from the larger kind, yet I do not think it necessarily follows, and I believe a little care along the line of watching for the families that produce good sized litters, will enable you to raise good sized litters from the medium sized hogs.

Mr. Kegley—I want to bring out this thought, that whenever you finish a hog on the outside as you do this show type of hog, you are as sure to fill her up and round her up inside as outside. That is a corollary that follows. While I believe it is true that you can not raise on an average as big litters, it is true you can raise big enough litters. I want to bring out this point, that we do not have to get 9 or 10 and up to 14 pigs to the litter to make it profitable. I think it is true that if you round up a hog outside, you may expect her to round up as much inside and therefore there won't be the room for the great number of pigs that you used to have in the former type of hogs. And whenever you hear men advertising that they have a strain of hogs that are producing, 13 or 14 to the litter, you can make up your mind it is a hog you do not want on your place.

Mr. D. L. Howard—I think small litters in hogs are brought about more by condensed feeding than anything else. What I mean by that is too much of the single ration to your animal. Now then you can refer to the Poland-China hogs that were raised years ago, not sold or fitted for market until they were a year and a half or two years old. Those sows ran in the timber, they fed on grass, they had a wide ration, and that wide ration developed their power of producing large litters, while a condensed ration pinches that power. I believe in the development of the hog, that the future hog will be the great big hog with this fine finish to it, as much as you see in the smaller type, as you might call it that is driven into the show ring. I believe it is possible, and I know it is a fact that a man can raise a great big roomy sow and still have her full of quality, so that when she is fed for market she will be rounded out all over, and her sides will be deep and she will be filled up inside. You can not do that on the condensed ration of corn, and you can not get this large type of an animal with this show quality on a condensed ration of feed. You can as well by proper feeding have a great big boned, legs standing like posts under the animal at four corners, as the smaller bone, and whenever you feed for that bone you develop the power

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Dipping, washing or spraying live stock is essential for the cure of Scab, Mange, Itch, etc., and for killing and removing ticks, fleas, lice, etc. Lincoln Dip is composed of nicotine, sulphur and valuable oils, but contains neither lime nor arsenic. It is effective but not poisonous or injurious. Write for literature upon treatment of stock for skin parasites.

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Branch Office: 622 Whitney Building, Kansas City, Mo.

of the sow to produce more and better litters. I think a sow that will raise 7 or 8 pigs a pretty good sow, and I would rather have her and her litter for the dollars and cents in it, counting the cost of raising it, than anybody's litter of 14 pigs.

(Calls of "That is right.")

Mr. W. M. Godby, of Shannon City—I have bred hogs and been in many good herds of all breeds of hogs. We have good hogs in all breeds and I have failed to find any certain type of hog in any herd. You will see some show type and some coarse and some of other types. If you keep them too compact, you have to have size and finish, but we do not accomplish it in every animal.

Mr. William Lambing, of West Liberty—I think the medium sized hog the chairman refers to in his paper there is the same hog Mr. Howard describes as the big loose-made hog. It is the difference in the way we look at it. I do not think Mr. Howard or many breeders in the room have raised what was known as the larger, coarser type of hog, because we haven't seen many of them of late years. The type of hog known as the big coarse hog of years ago would weigh 800 or 1,000 pounds at maturity. You only occasionally see that kind nowadays. Hence I think the big loose hog Mr. Howard describes is the type the chairman refers to in his paper as the medium size. My experience has been that the larger animals of the present type of our important breeds are the best mothers, best breeders, best sucklers and have the most uniform sized litters of good size. I have often been on men's places where they told me their hogs were of medium size, and they had what I called a pretty large class of hogs. I have seen others called medium sized and I considered them undersized. Either they or I was wrong in what constituted the medium size. I think there is a good deal of misapprehension about the medium size.

Mr. Godby—I think, all breeders should get the best size they can get with finish.

Mr. F. J. Hitte, of Omaha—I think there is another phase of this question we have not yet touched. The ultimate value of the hog comes home to us when we take him to market, and I do not know of there being any important differences made in the price of hogs when the local buyer goes out to buy hogs. He states his price and pays about the same thing wherever he goes. It might be that these finer, nicely topped hogs, showing more quality, might bring more money when they go to the packing house or into the yards where they are sold to the packers, a carload of them might bring a bigger price, but when it comes home to the farmer I do not see how he gets any better price by having a little better quality. For that reason I think he ought to breed as far as he can for the pounds he is going to get, and not for any particular show or quality at the expense of pounds, for he is going to get the same price.

Mr. W. Z. Swallow, of Booneville—Is it not a fact that our hogs that have made the great reputations as breeders are the medium sized hogs? Take old U. S., Black U. S., Tom Corwin 2d, Tecumseh and Chief Tecumseh 2d, and all of those that have been the best breeders and aren't they medium sized?

Mr. Cotta—We want the one that makes the most pounds of hog from a bushel of corn. It is profit we are looking after, converting the bushel of corn into the most cents.

Mr. D. L. Howard—I want to say a word with regard to what Mr. Hitte had to say as to the value of the hog to the man that was raising them in town. Now there is quite a difference in the value of the pound of hog and pound of steer, when it comes to the market and when it goes on to the block. If you will study the markets

you will find there is quite a range of prices, or quite a variation with hogs going into the market, and some hogs will go in there and may be weighing about the same or a little more, but they won't bring as much as the other hogs at the same weight. It is with the hog just as it is with the steer. You can take a native breed or common breed or mixed breed steer, and you can feed him and put pretty near as many pounds on him for the amount of feed he eats as the well bred steer, but when he comes into the market there is a whole lot of difference in the prices. Why is that? Because the cut off the well bred animal is worth 40 cents, where the cut off the common animal is worth 25. The parties who purchase the meat are getting more dainty, and they want better meat all the time. The one that will bring the most money for a cut is the best animal. I admit that when the local hog buyer goes to buying hogs of Tom, Dick, and Harry he pays the same price per hundred, as a rule. But raise a carload of good hogs and take them to Chicago and sell beside a carload of ungainly looking hogs, I do not care whether they are bacon hogs or what they are, and they will sell for more money, 40 cents a hundred sometimes more, than the other hogs. And a well-bred and well-rounded steer will sell for 50 or 75 cents a hundred more than the common steer, when the common steer may have put on as many pounds of meat.

A member—There is as much as \$1.50 difference sometimes.

Mr. Hitte—Then that argues that the man who raises the better quality of hogs ought to ship his own hogs and not sell them locally. It is a

ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc. on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" Free. Zoener Disinfectant Co., 61 Bates St., Detroit, Mich.

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SPRINGFIELD, Mo., Jan. 10, '98.
 As your Balmoline was so successful in curing other wounds on both man and beast on my farm, I concluded to try it for CORN HUSKERS' chapped and bleeding hands. Two nightly applications were sufficient to heal and soften the rough skin as it had not been for years, and now with Balmoline on hand, corn husking has no terrors for me.
J. T. FREIGHT.

great deal like selling eggs; when you sell to the buyer it makes no difference whether they are Bantam eggs or nice, large ones.

Mr. President—There is another point in what Mr. Hitte said that has been overlooked. I may have 10 head of hogs to drive to market, and they may weigh 200 pounds apiece, making 2,000 pounds. Hitte may raise 2 that weigh 1,000 pounds apiece and he will have the same amount of money as I. But don't I produce my 2,000 pounds for less money than he can? I am satisfied I can. I am satisfied no man can make 1,000 pounds of pork on 1 hog as cheaply as I can on 2 or 3 smaller hogs. The point is, which is the cheapest way to produce a pound of pork? I am thoroughly convinced that I can take a well-finished hog, that weighs 600 or 700 pounds when he is finished out (I do not want one of these little 300 or 400 pounders, but I can take one of these well-finished, medium sized hogs), and make a pound of pork cheaper than the big hog breeder.

Mr. W. M. Lambing—Unless the opinion of the president on this question is correct all the cattle feeders in this country that have been adopting new methods of feeding are making a big mistake. The present tendency is to feed the 2-year-old steers, while formerly they fed 3- or 4-year-olds. The market is changed. The same tactics must be used in the swine business. The packer does not want the big slab-sided hog. He used to pack in one season of the year and they had to be kept in order to have all they wanted for the year. The whole system of meat production and meat preparation has changed. It is the lighter, handier hog, or steer, that is used now, and experience has demonstrated that the lighter or medium one is the most profitable, that he will make the most pounds in the least number of days with the same feed, hence he must be the one that makes the most money. The experience of our experiment station, also has been in that direction, as well as that of our feeders. I have had them weigh 186 pounds at 8 and 1/2 months old, and that was done with the medium size hog, and not with the extremely large hog.

Mr. F. F. Fallor, of Newton—There seems to be one point in here that comes about as near home to us as any other point at this time, and it has not been touched. It is this: Going back a little I notice that our chairman in speaking of the large hog coupled it this way: The large hog with the coarse ears, and so on, and generally indicated that as a rule the larger the hog, the coarser the hog. My business as a swine breeder particularly is to raise hogs and sell to the outside producers, as a rule. I once in a while sell one to a breeder, but if we would narrow ourselves down to the supplying one another with pigs, to use on each other's herd, we would have a slow time of it in a short time. If we go on and breed finer, as some of the breeds, and in fact all of them, have in the last 25 years, we will be doing what we should. They have all got finer, but they are not as fine as they were 4 or 5 years ago. We as breeders produce the animal that goes to the man that raises the pork for the general market. We want to raise a hog with size enough, constitution enough and vigor enough to give those pork producers an opportunity to have something that will give more constitution and stamina to their hogs, and I will give you my reason for that. The majority of men who raise hogs for the market, for the dollars and cents they will bring by weight, are the ones that feed most largely on corn, and will continue from one generation to another feeding on corn and raise sires and dams all on corn, the same strain and same size and same condition, that hog will naturally become finer and stronger. We as breeders should be careful not to set forth the idea that we want to get our hogs finer as breeders. We must feed him on the mixed rations; something that will give more size and bone, so that these farmers that raise almost exclusively with corn will have more constitution, that they can not get in any other way than from us breeders. I do not think it good advice to give to anyone to not look to size. I do it and I have to do it. Here is another point the gentleman made in his paper, that when a man advertises size and growth and quality he does it for effect, business effect, or for trade. I would like to ask the gentleman to explain why it is that when I get letters, or anybody else gets letters—I think it is a safe proposition to say right here that 9 letters

out of 10, if they speak at all, speak about size, plenty of bone, constitution, big around the heart, bony, and well up on their feet. One will say, "I do not care a snap whether they have big ears or not, but give me size, constitution and vigor," and if you do that the two systems won't work together.

Mr. Lambing—Mr. Fallor's remarks brought out a thought I can not let go by. As I said awhile ago, we differ as to what is the large, coarse hog and what is the medium size. About three years ago a gentleman from Kansas wanted to buy a pig. He wanted the largest, boniest, biggest, coarsest pig I had. I had one bunch unusually large and coarse; the pigs were not my own breeding, and I thought I would never get them sold; but I thought here was a man for one of them, so I told him we had exactly what he wanted. He wrote me he was expecting to go to Chicago with a couple of carloads of cattle and he would stop and see us on his return. He stopped off on his return and was anxious to go out and see the pig I had described to him as filling the bill. I showed him the large, lank, hungry-looking hogs, as I called them, but would have made 750 pounds when they were matured. He said: "Those are not the hogs I want; if you had sent me that I would have sent it back by the next express." I said, "Isn't that what you said?" He answered, "Yes, but I did not suppose you had any like that." He took one of the medium sized ones and paid \$10 more for it than I asked for the others, and was better satisfied. It was merely a difference as to what constituted a medium hog. It is very easy to confound that.

Cross-bred vs. Pure-bred.—V.

EDITOR KANSAS FARMER:—If I make a quotation from one of the most distinguished breeders in America, I can not offend any person, and the "young breeders" of Kansas may get more valuable information than they would otherwise. I will quote from Wm. Warfield's work on cattle breeding:

"A gentleman who was once a large cattle breeder and always a strong advocate of in-and-in-breeding in cattle, said to me recently that a cross of Cruickshank bulls on the Rose of Sharons was remarkably successful. It was very contrary to his natural view, but in perfect accord with the best experience of scientists and breeders. In a long acquaintance with cattle-breeding and familiarity with the methods pursued in many herds, I have seen much which has led me to a thorough persuasion that the correct system was to breed the best to the best, and to avoid close affinities. Close study of the results in the show ring leads me to the conclusion that while an occasional animal of great merit is found to be the result of in-and-in-breeding, that a large proportion of winners are descended from winners, particularly on the sire's side, and mainly out of families of cattle bred in a promiscuous manner. It would be easy to run over the experience of a lifetime and bring forth a great number of instances to confirm this position, but a great mass of illustrations, as it can not by the necessity of the case reach demonstration by mere weight of quantity, however great, is of no value; and I shall therefore only adduce a few notable and representative examples. One of the most remarkable animals I ever owned or saw was Loudon Duchess 2d. Her career in the show ring was extraordinary and almost without a reverse, although exhibited at many fairs from the time she was a calf, both in Kentucky and several other states, during which time she bred regularly, and produced calves of the highest class in every instance, her second and third calves being the scarcely less distinguished show-yard winners Loudon Duchess 4th, and Loudon Duke 6th, both of which were esteemed by some excellent judges as of superior excellence to their dam. Loudon Duchess 4th indeed, triumphed over perhaps the finest ring of females I ever saw gotten together, consisting of fifty-six head, at the Bourbon County (Ky.) Fair in the autumn of 1870, when she was a yearling. These calves were by Muscaton, a bull of national reputation for his individual merit, his recognition in the show yard, and his wonderful breeding qualities.

"If we examine the breeding of these animals, we can not but be struck by the very miscellaneous character of it. Turn to the extended pedigrees as displayed for a few crosses and note the mixed nature of each and the diversity of the one from

the other. When interfused in their offspring the result is an increase of variety in the blood. Loudon Duchess 2d was also bred to Robert Napier (27310) with somewhat less success, but still she produced to him some unusually fine animals and with his rich Booth breeding, he brought as great diversity to their offspring as did Muscaton."

I must drop the quotation at present to explain and comment on it. Mr. Warfield was second to no one in America as a great and successful breeder, ranking with R. A. Alexander and Abe Renick. It is plain to be seen from his writing that his herd was miscellaneous bred, as he understood the term. The extended pedigrees he referred to are those of Loudon Duchess 2d, Muscaton 7057, and Fanny Forester (of which more anon). The bull Robert Napier referred to was a pure Booth, bred by Wm. Torr, of England. Warfield says he produced some unusually fine animals, and now let everybody hold his breath, while we make the announcement that, according to Mr. Warfield, the great Muscaton was miscellaneously bred. His breeder was R. A. Alexander, who bought the noted cow Mazurka. She was the grandam of Muscaton, and her daughter was the dam of Muscaton. This proves among other things that Mr. Alexander himself was breeding cattle with miscellaneous pedigrees, of which somebody appears to have a woly horror—but the miscellaneous breeding of Muscaton, with his grand individuality, was what attracted Mr. Warfield, and induced him to buy him. It is fair to presume that the Booth cross, or two Booth crosses in his pedigree were not the least of the attractions, as we know Mr. Warfield imported the pure Booth bull, Robert Napier 8975 for use in his herd, and we have in his statements, as here-in quoted, evidence that the cross was a successful one. It seems nothing less than brazen impudence, stupidity, or malice that will induce any intelligent breeder at this day to proscribe cattle of Booth breeding, and assert that they can not be successfully crossed upon any other strains of cattle.

Dunlap, Kans. D. P. NORTON.

A Way to Prevent Blackleg.

Among all the marvelous achievements of science there is none of more practical value to the stockman than the results that have been obtained in the work with blackleg. Here is a disease that every stockman knows to his sorrow—a disease that is estimated to kill 800,000 cattle every year, which would mean a loss to the cattle business of twenty million dollars annually; a disease which invariably terminates fatally and for which there is no known cure; a disease which spreads as insidiously as fire in hay, as the bodies of cattle dead of the disease are literally massed full of the germs, and when the carcass is broken up or decays, the germs are spread about, ready to infect any other cattle which may occupy that region. Even if buried, the germs are brought to the surface by earth worms, ants and gophers, and may even be carried long distances by rains and brooks, all the time entirely capable of producing the disease in any cattle with which they may come in contact.

So extensive are the onslaughts of the disease and so impotent are we to cope with it that it seems to threaten the destruction of our entire stock industry. Fortunately, a visit to the Biological Laboratories of Parke, Davis & Company, the great firm of manufacturing chemists at Detroit, Mich., is reassuring. Here we see where science has triumphed over this impending danger. And it is after all so simple; just as vaccination will protect a person from smallpox, so an equally simple vaccination of cattle will protect them from blackleg.

At the Biological Laboratories can be seen the whole process of making and testing this vaccine. After a lot has been made, it is not sent out until it has been thoroughly tested on cattle, and has proven to be entirely satisfactory. Here, then, we have the secret. Let each and every stockman vaccinate all his cattle, and keep them vaccinated for a few years, and the disease will disappear. The cost is insignificant—the loss of a single steer would be greater than the cost of vaccinating a large herd, and the results are of incalculable value.

If your druggist or your veterinarian does not have Blackleg Vaccine, write direct to Parke, Davis & Co., Detroit, Mich.

Gossip About Stock.

Manwaring Brothers, of Lawrence, Kans., in writing Kansas Farmer report as follows: "Our stock have done well and we have made several sales and shipments of late; sold 4 sows to Mrs. Nellie Martindale, of Madison, Kans.; 3 pigs to J. H. Huggins, of Toronto, Kans.; 3 to John Mason, of Great Bend, Kans.; 1 to Geo. Hussey, of Lee Summit, Mo.; and 1 to R. O. Furneaux, of Moran, Kans. One of our sows farrowed 12 pigs on June 18 and eleven of them were saved; but we find demand for Berks so strong we are not going to have pigs enough to supply trade."

W. S. Hanna, of Richter, Franklin County, Kansas, is well pleased with his sales of fine Poland-China swine during the present year, the same amounting to over \$300, and he has shipped animals to eleven different States. He has orders for present week for four to be shipped to different points in Kansas, Oklahoma, and Texas. During the past month he has sold and expressed to Pennsylvania two bred sows, three to Nevada, and fifteen to Nebraska,

TO THOSE DEFORMED

Crooked Feet, Spinal Diseases and Deformities, Hip Disease, Infantile Paralysis and Deformed Limbs and Joints are generally considered incurable; not because they are, but because the methods generally employed fail to accomplish a satisfactory result. Parents of afflicted children and patients themselves usually make several ineffectual efforts to obtain a cure, and finally become discouraged and more or less hopeless. The success which has attended our efforts in the treatment of crippled, deformed and paralyzed children and young adults during the thirty years we have been engaged in this special work, justifies our opinion that most every case of deformity and paralysis can be cured if treated in time and by our methods. We are willing to guarantee a perfect and permanent cure in every case of crooked or club feet of whatsoever variety, so long as the patient is of reasonable age; and we will accomplish the cure without severe surgical operations, plaster paris or other painful methods. We cure hip disease in almost any stage without confining the patient to his bed or room. Shortening deformity of the limbs or loss of motion should never occur and will not occur if we treat the case in time; and in the majority of cases they can be corrected after they have occurred. We know from actual experience that plaster paris, leather and felt jackets are obsolete and injurious in the treatment of spinal curvature or Pott's Disease, and have demonstrated the superiority of our methods in hundreds of cases. Children afflicted with infantile paralysis will not outgrow the trouble, and cannot be cured by any of the methods ordinarily employed. We have special means and facilities for the cure of these cases, and will be glad to furnish information. Write us regarding any case of deformity or paralysis. Our opinion is valuable to every afflicted child or person who desires relief. Our pamphlet, references and advice on any case are free of charge, and we are willing and anxious to be judged on our merits.

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and he still has several well-bred herds left. Mr. Hanna has been engaged in Poland-China breeding for over twenty-one years, and now has some of the finest animals in his herd that can be found in Kansas. Write him for description and prices.

We are pleased to insert, this week, a new advertisement, and of larger size, for Col. J. W. Sparks, live stock auctioneer, of Marshall, Mo. Colonel Sparks' popularity among live stock breeders has given him opportunity of conducting sales in twelve different States during the past year, and he is now engaged for sales in twelve more for coming year. He has held sales for some of the best breeders in America, and is intimately acquainted with nearly every stock grower of importance west of the Mississippi river. He is thoroughly posted on pedigrees and individual merit, which makes his work at his sales very satisfactory both to buyer and seller. Any one desiring his services at a sale should correspond with him as long in advance as possible.

M. L. Somers, proprietor of Sunnyside Farm, Altoona, Kans., reports his herd of Poland-Chinas in the very best condition, with bright prospects for the near future. He has some choice September, 1900, boars for sale, four of which are even now fit for the fair show ring. He also has a fine lot of gilts for sale. Mr. Somers has recently purchased a young Black U. S. boar of which he is quite proud. The commingling of the blood of J. H. Sanders and Short Stop, the Columbian winners, has given Sunnyside herd an extra large, well-proportioned hog of the very best form, large boned, good length, and of early maturing type. Mr. Somers' orders were so numerous during the past few months that he was not able to supply all the bred sows that were called for, but will be able after July 1 to ship his fine gilts of 1900 either bred or open, as may be desired by his customers. He will be pleased to have any one contemplating purchasing fine Poland-Chinas write him for prices and descriptions, also will be pleased to have breeders call and inspect his fine herd.

Pullman Ordinary Sleeping Cars for Tourists

are the most comfortable, commodious means of travel for large parties, intending settlers, homeseekers, and hunting parties.

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.

For full information call on or address, F. A. Lewis, City Ticket Agent, 525 Kansas Avenue, J. C. Fulton, Depot Agent.

When writing advertisers please mention Kansas Farmer.

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.

Navicular Diseases.—I have a pony two years old that is lame. Local veterinarians have been giving the feet hot baths, also bled them and gave a spoonful of pulverized alum, but it does not seem to get better.

Milford, Kans. F. E. SMITH. Answer.—Have a smith dress down the feet all they will bear, then poultice with a flax seed meal. Keep it on and soak with hot water every hour for 2 days, then wash off and when dry apply the following around the top of the hoof and for an inch above; leave on for 30 hours and wash off and grease: Powdered Cantharides, 1/2 ounce; hogs lard, 2 ounces; mix and apply with hand after poulticing as directed.

Scours.—I have a young colt about 4 weeks old. When it was born it was so constipated that we had to give it a soap and water injection to make its bowels move. Now it has trouble the other way; when it lies down there is a watery substance runs from it and when it walks it sometimes squirts out a foot behind it.

Coffeyville, Kans. J. T. SMITH. Answer.—Give the colt 1 ounce of castor-oil and a teaspoonful of paragonic, mix and give at once. Repeat the paragonic once a day for 3 days.

Scirrhus Cord.—I have a hog about a year old. I castrated him last January. He healed up apparently all right, but after being in the fattening pen about a month I noticed a little lump forming where the incision was made. This kept getting larger and larger, and I finally caught the hog and opened the lump. There was no pus or anything of the kind, but seemed to be a fatty mass which bled profusely.

Hoyt, Kansas. Answer.—It is caused by the opening being too small and high, and leaving too much of the covering or cord on. Pick a cool day and have a qualified veterinarian dissect them out and remove them with the ecraseur. Keep flies away and they will heal up sound.

Weakness.—My colt had a bad case of distemper last summer, was poor all the time. I fed it oats and it got fat this winter, but about 6 weeks ago it commenced tipping over just a little in ankles of front feet until now it can hardly walk.

Narka, Kansas. Answer.—Have the feet dressed down well at the toes and apply the following to the tendons and joints, and bandage and repeat it three times a day: Aqua-Amonia, 3 ounces; water, 2 quarts.

Injured Joints.—Last March my 4-year-old bay horse got kicked on the left hind leg about one inch above the hock. The force of the kick broke the skin, and water and matter came out for several days. The horse was very lame for a month or more and suffered acute pain all the time. The joint is swollen some, but is not stiff. The break in the skin is healed over.

Garnett, Kansas. J. M. CRAIG. Answer.—Chip off the hair and apply the following: Powdered Cantharides, 1 ounce; Biniodide of mercury, 3 drams; hogs lard, 3 ounces—mix and use as directed.

Injury.—My driving horse, while being driven in a trot across a street car track, struck the toe of the left hind foot against a rail, causing him to go lame for a time. Has improved until now lameness is only noticeable when going down hill. There has never been any fever or swelling apparently, nor tenderness of touch from hard rubbing.

Dawkins, Colo. H. H. HENSELEY. Answer.—Stand him in a tub of hot water for 1 hour each day once a week. Entritis.—We are having sickness among our cattle and I should like to know what to do about it. I have lost a cow and steer, and now 2 more cows are sick. They commenced with scours

that turned to blood, first streaks and increase slimy, with some griping. They eat but little. Are on prairie hay, and I keep rock salt by them all the time. Latham, Kans. C. J. BRISCOE.

Answer.—Give a pint of castor-oil and a pint of linseed-oil with 2 ounces of tincture of opium at a drink.

Tuberculosis.—I have 4 sick cows and will give each one's symptoms separately. The first cow I noticed about six months ago; she did not eat well and seemed to hold her head on one side as if her neck was stiff. She had no life, but before had always been active and shy. She had no cough, but seemed to pant and breathe hard. She did not chew her cud, and I gave her salt pork to bring her cud and succeeded in doing so in a few days. She eats heartily, but is very poor and weak. The second cow seemed in good health until about a month ago. The first symptoms I noticed was that when I milked her she would cough, but supposed it was because she ate her food too fast. Her coughing grew worse and about three weeks ago she began to breathe hard and make a snorting noise at every breath. Then came a lump in the pit of her throat, just back of what I would call the throat latch. It is now about the size of a man's fist and is on the inside, but the skin is not tight. When she breathes her fier cheeks blow up and the saliva flows from her mouth most of the time especially when she coughs hard. No. 3 has breathed hard for a year, but does not seem to be sick. Is in good flesh, eats well, but makes a snoring sound when breathing. No lump or enlargement noticeable in throat. She breathes hardest when driven or eating her bran. The fourth is a bull calf, about two months old. When it was about two weeks old it got to coughing and would not drink well. It now drinks better, but still coughs and pants on a warm day. It does not grow and is very poor. Halstead, Kansas. G. E. NORRIS.

Answer.—Have a qualified veterinarian test your stock for tuberculosis, which the symptoms indicate. It is contagious and no treatment would be of much benefit. One may have lump jaw.

Injury.—I have a horse about 17 years old that was in good health until about two years ago. All at once she got nervous and would spraddle with her hind feet and set back on her front feet as though she wanted to pull back. When in that position her lips will twitch and the muscles along her neck and back get hard. Whenever she is hitched up she will get in the same position, and in driving she will go along all right for a while then suddenly brace herself as if to keep from falling. She will play in the pasture and is never seen in that position unless you try to catch her. She is fat and has never raised a colt. Would a mare in that condition be liable to breed?

Wellsford, Kansas. W. K. MILLER. Answer.—Your mare probably has an injured spinal cord. It is probably just in front of her shoulders and moving her head, or the collar may cause the trouble.

She would likely breed and it would be best for her. Do not think any treatment would benefit her.

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—J. C. McQueen, 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—C. 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. Toler, secretary, Wichita; October 1-4.
Stafford County Fair Association—John W. Lill, secretary, St. John; August 28-30.
Summer County—Molvane Agricultural Society—John A. Reed, secretary, Mulvane; September 27-28.
Wilson County—Fredonia Agricultural Association—J. T. Cooper, secretary, Fredonia; August 20-23.

EDITOR KANSAS FARMER:—There have been more Hereford cattle bought and sold during the first five months of 1901 than ever before within a like period during the history of the breed. This may be no surprise perhaps, to those who have kept in close touch with Hereford matters, but the number and size of these transactions is doubtless a matter of wonder to many. During the above period 9,338 applications for transfer have been received at this office—but 4,700 less than were received during the entire year of 1900. Of this number by far the larger portion is made up of small sales—from a single animal to a carload—and about 1,200 were transferred at auction sales. The result of this brisk traffic in Herefords is that the majority of the breeders have been drawn upon for their entire surplus, some of them reporting that they have nothing left for sale over ten months of age.

Hereford Sales.

It is a matter of some interest to know from where these cattle come and where they go. In the table given below the sellers and buyers are classified by states and will show to what extent the Hereford breeding industry is spreading:

NUMBER OF HEREFORDS TRANSFERRED FIRST FIVE MONTHS, 1901.

Table with 3 columns: State, Sold, Bought. Lists states from Alabama to Wyoming with corresponding numbers.

The above table does not include the number of pure-bred animals transferred before they are recorded, nor does it include the many recorded animals sold for use in grade herds where no formal transfer on our books is needed or requested.

those of the central and eastern states would also be appreciably increased. One of the gratifying features is the number of animals purchased by the range states. The table shows that Wyoming, New Mexico, Colorado, Utah, Texas, Indian Ty., Montana, Oklahoma, Idaho, Nevada, and Arizona purchased 2,787 registered Herefords during these five months, or practically 30 per cent of the entire number of cattle sold. It will also be noticed that Texas alone has purchased almost 1,000 head from other States within this period. It is no wonder that a recent writer classes Herefords as one of the three principal products of Texas.

The profitability of an industry depends upon the sale of the product, and the Hereford breeder certainly has no reason for complaint. Prices have been no lower than last year in spite of the increased number to be sold, and the ease with which a single animal or an entire herd can be disposed of is an advantage that is not enjoyed to a like extent by the breeders of any other kind of pure-bred stock.

If warm weather makes you feel weary you may be sure your system needs cleansing. Use Prickly Ash Bitters before the hot weather arrives; it will put the stomach, liver and bowels in order and help you through the heated term.

Are You Going

to San Francisco with the Epworth League? The Union Pacific will run Special Tourist Sleeping cars every day from July 6th to July 13th, Topeka to San Francisco without change. Rate \$5.00 for double berth. The round trip rate will be \$45.00 and tickets will be good till August 31st, 1901. Stop-overs may be secured at and west of Denver. For other information see your nearest Union Pacific Agent.

Clever Arrest of Deserters. One of the neatest arrests on record was effected by a policeman near Bourne, England, not long ago. Suspecting two men of being deserters he stepped up behind them and called out sharply: "Attention!" Taken unawares the men sprang to position in true military style, only to find themselves the next moment in the arms of the law.—Chicago Chronicle.

Beware of Ointments for Catarrh That Contain Mercury.

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is tenfold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free. Sold by Druggists, price 75c per bottle. Hall's Family Pills are the best.

FOR A SUMMER OUTING.

The Rocky Mountain regions of Colorado reached best via the Union Pacific provide lavishly for the health of the invalid and the pleasure of the tourist. Amid these rugged steeps are to be found some of the most charming and restful spots on earth. Fairy lakes nestled amid sunny peaks, and climate that cheers and exhilarates. The

SUMMER EXCURSION RATES

put in effect by the Union Pacific enable you to reach these favored localities without unnecessary expenditure of time or money.

ONE FARE FOR THE ROUND TRIP

plus \$2.00 from Missouri River, in effect June 18th to 30th; July 10th to August 31st inclusive.

The Union Pacific will also sell tickets on July 1st to 9th inclusive, September 1st to 10th inclusive, at \$15 for the round trip from Missouri River points.

Return limit October 31, 1901. Proportionately low rates from intermediate points. Full information cheerfully furnished upon application.

F. A. LEWIS, City Ticket Agent, 525 Kansas Avenue. J. C. FULTON, Depot Agent.

FOR SALE OR RENT—Improved 60-acre farm, adjoining town. H. C. Alexander, Elstnore, Mo. 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.

The Home Circle.

THE ANGLOMANIAC'S LAMENT.

It's a beastly funny earth
Dontyerknow.
We're in trouble from our birth,
Dontyerknow.
The babies like to cry,
And the ladies like to sigh,
And we all have got to die!
Dontyerknow?
When we're young we have the mumps,
Dontyerknow;
When we're old we have the dumps!
Dontyerknow.
And every blessed day
We more or less decay
And our bills we have to pay!
Dontyerknow?
Our wives they will get cross,
Dontyerknow;
And men suffer from remorse,
Dontyerknow.
They work both day and night,
For this life is just a fight,
Oh, it really isn't right!
Dontyerknow?
We try to make a splurge,
Dontyerknow.
But it's like a funeral dirge,
Dontyerknow.
On our face we wear a smile,
But it isn't worth the while,
Yet we have to be in style,
Dontyerknow?
One must be so slick and slim,
Dontyerknow;
If he would be in the swim,
Dontyerknow.
It makes a chap feel sore
That of coin he hasn't more—
Oh, it's all a horrid bore!
Dontyerknow?
If we hadn't got the dress,
Dontyerknow;
We must all of us confess,
Dontyerknow.
We would have more ready cash,
And could cut a bigger dash—
But the world has gone to smash!
Dontyerknow?
Once I loved a charming girl,
Dontyerknow;
Whom I met out in the whirl,
Dontyerknow.
She could warble like a bird,
And I asked her, "Say the word!"
But she said, "You're too absurd!"
Dontyerknow?
Oh! Our lives are very short,
Dontyerknow.
So I really think we ought,
Dontyerknow;
(And we can if we but try)
To be happy ere we die—
For it soon will be "Goodby!"
Dontyerknow?
—Howard Saxby in Cincinnati Times-Star.

THE MAN OF THE WEEK.

J. M. Rusk.

(Born June 17, 1830; died November 21, 1893.)

In discussing classes as influencing public opinion, James Bryce, in his "American Commonwealth," says: "I begin with the farmers, because they are, if not numerically the largest class, at least the class whose influence is most widely felt."

We, as Americans, do not agree with the great English writer on our country and its institutions; we do not "begin with the farmers." The farmers themselves do not begin with their own class and industry.

We do not realize the importance of agriculture to our country—a country whose boast is the bulk and value of its productions. We do not know that the farms produce the greater part of the wealth that makes us rich and great. We read, but fail to remember:—

- That Agriculture is big;
That Agriculture loads the railway trains;
That Agriculture fills the ships that go down to the sea;
That Agriculture furnishes 70 per cent of our exports;
That Agriculture furnished for export during the ten years beginning with 1890, goods worth more than 8340 millions of dollars.

And there are a million more farms in the United States than there were when Mr. Royce thought it proper to "begin with the farmers."

Jeremiah McLain Rusk was born in Ohio and died in Wisconsin. He was a politician—and more than a politician. He served in the Civil War, and became a brigadier-general of volunteers by brevet; was a member of Congress from Wisconsin, 1871-77; was secretary of agriculture, 1889-93. In this paper we are interested in him as the first secretary of agriculture—noting in passing that Norman J. Colman held the office and had the title for a week or so before Mr. Rusk was appointed.

In his first annual report, Secretary Rusk said he considered it his first duty "to give particular attention to such a readjustment of the affairs of the department as should make it better conform to its new relations under the law, and then to give careful thought to the formulation of plans for

a thorough and complete reorganization of the new department." An experienced executive himself, Secretary Rusk knew his own powers and limitations. He divided the department into what he called "two grand divisions," the one including the administrative and executive features, the other embracing the scientific investigations. He retained personal charge of the first division, and placed the scientific work under the direction of his assistant, a man exceptionally well qualified by natural endowments and training for that particular work.

Mr. Rusk believed in the importance of agriculture, and did not hesitate to magnify the importance of his position at the foot of the President's council table. "It is to be assumed," he said, "that when Congress in its wisdom raised this department to its present dignity, and made its chief a cabinet officer, the intention of our law-makers was not simply to add the luster of official dignity to an industry already dignified by the labor of its votaries, but to give it added influence and power for good in their behalf." He believed in power for service. After presenting an array of facts to justify the declaration, he said: "It may be broadly stated that upon the productivity of agriculture and the prosperity of our farmers the entire wealth and prosperity of the whole nation depends."

Secretary Rusk concluded the last paragraph but one of his first annual report with a sentiment which ought to be kept constantly before the American people: "The great nations of Europe strain every effort to make science the handmaid of war; let it be the glory of the great American people to make science the handmaid of agriculture."

Mr. Rusk has been characterized as follows, by one of the most competent workers in the Department of Agriculture: "Secretary Rusk was a very strong man as an executive officer, having a large fund of common sense and making good selections of subordinates and strongly supporting them."

Secretary Rusk was not vain enough to imagine that he had built a perfect department, complete in plan and organization. As he expressed it, his had been "but foundation work;" he hoped that succeeding administrations might find the men and the means to carry on the work of the department to the high destiny which I conceive it to be designed to attain." For himself, he expressed the wish that he might be considered "instrumental in securely laying a broad and lasting foundation for a magnificent superstructure."

Secretary Rusk did not do all he hoped to be able to accomplish for the Department of Agriculture, and for the farmers of the United States; but he made a good beginning; his plans are still in use. His character and his ideas have become part of the department. His efforts to benefit the agriculture of his country were wisely directed and effective. He enjoyed a large opportunity for usefulness, and improved it with exceptional ability and success.

D. W. WORKING.

Denver, Colorado.

Frozen Desserts.

Some of the best desserts for the summer months are those which are served frozen or partially so. Among these are ice creams, frozen custards, ices, sherbet, and frappe. All of these are made in an endless variety by the addition of different fruits and flavorings. An ice cream is a mixture of cream, sugar, fruit, or flavoring, and frozen completely. Frozen custards are made with eggs, milk (or cream) sugar and flavoring, cooked, cooled, and frozen. Sometimes raw custard is frozen. Sherbet is a water or milk mixture, sweetened and flavored and stirred constantly while freezing is going on. A frappe is very lightly frozen, resembling snow or slush.

Ice to be used in freezing mixtures should be finely crushed so that it will melt rapidly. To three parts of ice use one part of salt. If a freezer is not at hand a very good one can be made by using two pails, one considerably smaller than the other. The mixture to be frozen is placed in the smaller pail, this is set in the center of the larger one, covered closely, and the ice and salt mixture well packed about the outside. After the food to be frozen has become chilled and is ready to freeze turn the smaller pail from side to side or stir with a long handled spoon. Ice creams become more solid if packed for a time after the freezing is accomplished. Before they are too stiff to work into shape they may be

put into moulds and packed in ice to harden.

Fruit Ice Cream.—To one and a half quarts of thick, rich cream add two quarts of fresh milk and four cups sugar. More cream and less milk may be used if desired. Mix together, chill and freeze. Crush the fruit as fine as possible and stir into the cream after freezing has begun. For this amount of cream two quarts of strawberries crushed will make an excellent strawberry ice cream. One quart of canned peaches or two quarts fresh ones will be necessary for peach ice cream. Other fruits should be used in about the same proportion. Where the fruit does not crush readily it can be mixed through the cream just before serving and so become well chilled.

It has been of interest to the writer to note the manufacture of ice cream for retail trade in a near by drug store where some fifty to one hundred gallons of cream are dished and sold daily. Plain vanilla ice cream is the only kind kept ready to dish. Jars of crushed and sweetened fruit are at hand and the fruit called for is mixed through the customer's dish as it is being prepared to serve. The ice cream is not hard, just soft enough to eat without waiting, and the fruit and also the serving dishes are kept very cold. The flavor of these creams is beyond criticism the vanilla cream which forms the basis being made by an expert. The method is a good one and is practical to some extent in serving for fewer people.

Frozen Custard.—One quart milk, one cup sugar, four eggs, flavoring to taste. Beat white and yolk of eggs separately. Heat milk and sugar together, blend in beaten yolks, flavor, and take at once from the fire. Beat in whites when mixture is nearly cool and freeze.

Lemon Sherbet.—Juice of four large lemons, one quart water, one and one-half cups sugar, white of one egg. Make a syrup with the sugar and half the water. Chip the yellow off the lemon rinds, add to the syrup and boil five minutes. Strain, add the remainder of the water, cool and freeze. When frozen add the white of egg beaten stiffly.

Lemon Ice.—Make a good, rich lemonade, rather sweet. Freeze without much stirring. In making other ices use less lemon and add other fruit to taste.

Coffee Frappe.—Use equal parts medium strong coffee and cream. Sweeten to taste. Dissolve the sugar in the heated coffee, cool and blend in the cream. Freeze very lightly and serve at once. MARY WAUGH SMITH. Seattle, Wash.

Stormy Wedding Trip.

The celebrated voyage around the world by Captain Josiah Slocum in his 40-foot sloop Dauntless, has been matched by the wedding trip of Roy Ovaett, a lad of 19. Single-handed Ovaett sailed an 18-foot sloop from Seattle to Steward City, which is near Juneau, Alaska. Then he put about and beat his way home again, arriving here less than a week ago. Captain Slocum sailed with a fully provisioned and thoroughly equipped boat. Roy Ovaett had scanty supplies, \$10 in money, not a stick of spare canvas nor a foot of extra spars and a young wife to care for. That in brief is the story. Told in detail the narrative would make a book.

Ovaett is a modest young chap, with clear blue eyes and a frank smile. His wife is a beautiful young woman. She was Meg Goodell before her marriage, and the long months at sea have only added to the charm of her face.

The young couple were married early in last July and a few days later the husband went to Frank Faber, who owns the Brighton boathouse, and rented a sloop named the Ultra. He told Faber he was going for a wedding trip,

and the sloop was provisioned for a two weeks' cruise.

The Ultra left port on the 28th of last July. Three weeks later Faber received a letter from Allard Bay, in which Ovaett announced that he was going to take his wife to Alaska and that he was not coming back.

From the day of the departure the Ultra was not spoken by any craft. She disappeared as completely as if she had sunk to the bottom of the Pacific. And that is what in time people came to believe was her fate.

Mrs. Ovaett, prior to her marriage, had lived with her grandmother, Mrs. Goodell, in a little cottage close by the water front. Mrs. Goodell gave up her grandchild as dead and young Ovaett's family mourned for him as one lost to them forever.

A week ago the Ultra sailed jauntily up the bay and dropped anchor off the Brighton Boathouse. Many things happened during the long voyage to Alaska. There were storms and head winds. Provisions ran short—perilously short at times. Once they lived for two days on a handful of clams. On another occasion the Ultra staggered along in the teeth of a gale until her trysail parted, and for thirty-nine hours this boy stood at the tiller, holding her head close to the wind. Had the Ultra fallen off she would have upset.

Sitting in his cozy home this afternoon Ovaett told the story of his wonderful cruise along the shore of the North Pacific to Seward, Alaska. After working his way out into the ocean from Puget sound he took what is known as the inner passage to Alaska. That he was not wrecked a dozen times was due to vigilance and the numerous sheltered nooks along the irregular passage.

His two weeks' provisions were made to cover a much longer period by the practice of economy, and the addition of fish and deer meat. Ovaett had no trouble obtaining plenty of fish and when the meat larder ran low he resorted to the old-fashioned plan of "jack ing" for deer. There are many places along the coast even now where deer may be killed with comparative ease. Ovaett had a gun with him, and owing to the necessity of making each shot tell, got good results.

The sloop touched at Allard Bay, from which point Mrs. Ovaett was sent home by steamer, while Ovaett sailed home without assistance.—San Francisco Call.

That Abominable Churn-Dasher.

H. A. NORRIS.

Where is the man who has not been confronted with the perplexing problem of how to fasten a churn-dasher on so that it will not come off? And where is the housewife who has not had her nationality agitated by having the dasher come off at the bottom of a churning of thick cream? Here is a solution of the problem: Suppose both handle and dasher are made of wood. With an awl make a hole 1/2 of an inch from end of handle, then at a distance above this, equal to thickness of dasher, drive a tack about half way in. Take a piece of wire (galvanized or copper preferred) about as large as a knitting needle, put one end of wire into hole near end and wind the wire around the handle, making coils about 1/8 inch apart, and evenly spaced. When tack is reached draw wire as tightly as possible and wind the wire once around the tack, then drive the tack in tight and cut off unused end of the wire. Now take handle and turn it into the dasher; the wire acting as a thread will press its way into the wood and hold it firmly, and have no tendency to split either part.

Don't fail to take advantage of our "Blocks of Two" offer.

About Summer Resorts== California.
It is a mistaken notion that California and her matchless seaside and inland resorts are set apart for the wealthy few. They are for the toiling many as well. Prices at some of the best places low enough to suit thin purses—for example, Coronado Tent City, across the bay from San Diego. Go to California this summer on cheap tickets over the Santa Fe. A delightful outing. Write for illustrated books and cost of trip. T. L. KING, Agent The Atchison, Topeka & Santa Fe Ry., TOEPA, KANSAS.

The Young Folks.

CHICKENS COME HOME TO ROOST.

You may take the world as it comes and goes,
And you will be sure to find
That fate will square the account she owes,
Whoever comes out behind,
And all things bad that a man has done,
By whatsoever induced,
Return at last to him, one by one,
As the chickens come home to roost.

You may scrape and toil and pinch and save,
While your hoarded wealth expands,
Till the cold, dark shadow of the grave
Is nearing your life's last sands.
You will have your balance struck some night,
And you'll find your hoard reduced,
You'll view your life in another light,
When the chickens come home to roost.

Sow as you will, there's a time to reap,
For the good and the bad as well;
And conscience, whether we wake or sleep,
Is either a heaven or a hell,
And every wrong will find its place,
And every passion loosed,
Drifts back and meets you face to face
As the chickens come home to roost.

Whether you're over or under the sod,
The result will be the same;
You can not escape the hand of God,
You must bear your sin and shame,
No matter what's carved on marble slab,
When the items are all produced,
You'll find St. Peter was keeping tab,
And that chickens come home to roost.
—Selected.

Baby Stuart.

If Baby Stuart, whose picture is so well known to most of you, could tell his own story as he looks down from many a schoolroom wall, perhaps this is what he would say:

"My father was King Charles I of England. He was beheaded when I was 16 years old. That was a long time ago—more than 250 years. One hundred years before that my great-grandmother, Mary Queen of Scots, was beheaded. So you see that to be a prince of the blood, as I was, was not the happiest thing in the world. After my father had been put to death Oliver Cromwell, who had no royal blood in his veins, was made ruler of England; but it was not long before England decided to have a king again—to call back the Stuarts, and so my eldest brother was crowned Charles II. As Duke of York and Albany and the next heir to the throne I was as important a personage as could be seen at court; and I held high positions in the army. The picture so well known by the title 'Baby Stuart' was painted when I was about 2 years old, by a famous Dutch artist named Vandyke, whom my father, the King, kept busy painting his portraits and those of my mother, the Queen, and of my brothers and sisters as well. It is one of a group known as 'The Children of Charles I.' That is my brother, Prince Charles, with his hand on the dog's head. My sister, the Princess Mary, stands between us. She was afterward married to the Prince of Orange of Holland, and it was their son, William III, that married my daughter Mary—they are the 'William and Mary' that together came on after my reign in the rhyme you recite about the kings and queens of England. After William and Mary, Anne, my youngest daughter, succeeded to the throne—'good Queen Anne,' as she was called.

"I reigned—well, only some three years. I was past 50 when I ascended the throne, and, as perhaps you know, the most of my subjects did not like me overmuch, and I was glad to escape from London with my life, and run away to France, where my uncle, Louis XIII, was King. He gave me a palace to live in for the rest of my days. In history I am called James II, the last Roman Catholic King of England.

"When I was in the prime of life my royal brother, the King, gave me, as a reward for some hard fighting I had done for him against Holland, a great domain, millions of acres, over the sea in that strange New World neither of us had ever seen nor cared to visit. The King gave me two tracts, or patents, as they were called, and one of them included 'all the land from the west side of the Connecticut river to the east side of the Delaware'—a grant of what in truth belonged to the Dutch, who had a settlement at the mouth of the Hudson river called New Amsterdam, and farther up the Hudson a thriving trading post, Fort Orange. New Amsterdam we decided (the King and I) should be called New York, in honor of my royal highness, and Fort Orange we two renamed Albany. I was Duke of York and Albany, you know, and in those days it was by some thought that kings had the right to take anything they wanted, and do with it as they pleased. So you see that your Baby Stuart has two great monuments in your Empire State—the cities of New

York and Albany. These names, York and Albany, are pretty well sprinkled over the United States, each a memorial of your Baby Stuart.

"And one thing more should interest particularly the children descended from the soldiers of that revolution of which you are all so proud. I had a great deal to do with the starting of what became, in less than a hundred years, your war of the revolution. I was the first colonial proprietor that provoked an open revolt against England. In that part of my domain known as 'the places upon the Delaware' a Scandinavian called Long Fin stirred up the people against my tyranny, as he called it—my unjust, cruel laws—and there was a considerable uprising. But it was soon put down; Long Fin was whipped, branded with the letter R and sold into slavery—the beginning, you see, of '76, which had another ending.

"Had things been different from what they were some 250 years ago, my son, James Francis Edward Stuart, would have had a place in the list of England's kings, and would now be known as the 'Pretender,' and my grandson, Charles Edward Stuart, would not be called the 'Young Pretender,' but Charles III of England. But after my fight and the calling of William of Orange to the throne another line of royal descent from my grandfather, James I, was fixed upon and accepted by the Parliament of England; and that is why King Edward VII is King, though not a direct descendant of your Baby Stuart.

"Thanks to Anthony Vandyke, I have an enduring throne in the hearts of a multitude of children the world over—am crowned with their love. They look up from their books and find help in my sweet baby face to be good and strong and pure. I am never the proud, stern Duke of York to them, nor the runaway James II, but always Prince Jamie, 'who tossed his ball so high, so high,' in the gardens of Hampton Court, and who used to go sailing in the King's barge up and down the Thames, and who loved his royal father dearly, even if many of the people of England did not."

Yes, I think this is about what our Baby Stuart would say. Let us remember, when we look at our favorite print, that if James Stuart was not the best of kings he was ever a loving father and that separation from his children in his exile was the bitterest sorrow of his broken heart.—St. Nicholas.

The Monkey's Liver.

The monkey and the tortoise are commonly found associated in Japanese pictures. The following fable shows why:

The queen of the realms under the sea, the consort of the dragon king, fell ill and despite all remedies became worse daily.

The king who loved her dearly, wrung his claws and tore out his scales in despair and offered a large reward to anyone who should succeed in saving the queen's life.

The first who presented himself recommended monkey's liver as an infallible remedy. It was decided to try the prescription, in default of a better, and the tortoise, who, being equally well-fitted for land and sea travel, held the post of royal courier, was sent forth to procure a monkey.

In those days monkeys were not articles of commerce, so the tortoise as soon as he had reached dry land set out for the mountains where monkeys abounded, to catch a wild one. Now it must be evident to the meanest intellect that it is no light task for even the sharpest and most agile of tortoise to capture the stupidest and least experienced of monkeys.

But the tortoise, being acquainted with the ways of the monkeys, lay down under a tree and pretended to be asleep, all the time keeping a sharp watch from within his parted shell.

In a little while an inquisitive monkey came along and proceeded to have sport with the tortoise, trying to tickle him, pull his tail and turn him over on his back.

Suddenly there was a snap and the monkey was caught fast by the leg. As there was no escape the monkey seated himself on the back of the tortoise, who, holding his captive's leg fast in his mouth, proceeded with all his speed back to the dragon castle.

The queen touched with compassion for the poor wretch who was to sacrifice his liver for her sake, gave orders that he should be treated with the utmost kindness, and, as it was impossible for him to make his escape through the water he was permitted to roam freely about the palace.

Before long the merry fellow, who was full of tricks, and liked to relieve the monotony of his existence by con-

versation, was beloved by old and young.

But, though all the courtiers pitied him on account of the surgical operation to which he was doomed, their loyal regard for the queen's welfare forbade their betraying the secret.

Among the queen's ladies was the medusa, who at the time was not the naked and hopeless creature she is now, a defenseless prey to any foe, but wore a stout coat of mail and could bid defiance to the hostile attacks.

She could not endure the thought that this lusty young fellow must so soon give up his liver and his life in a cause the issue of which was more than doubtful. Perhaps she had fallen in love with him. At all events she told him of his impending fate.

For a time the poor monkey was overwhelmed with despair, then the natural elasticity of his disposition triumphed and he fell to taking counsel with himself how best he might exorcise himself from the fatal situation.

Soon afterward, during a violent rainstorm, he stationed himself before the gates of the palace, and when he saw the tortoise approaching, began to weep bitterly.

"Why do you howl so, as if you were on the spit?" the tortoise asked.

"Haven't I got reason enough for despair? When I left home I forgot to bring my liver with me. I left it hanging on a tree to dry and now the rain will ruin it and I shall die."

Now, of what use to the queen was a liverless monkey? There was nothing for it but to send the tortoise back with the monkey to get the liver.

But of course when the monkey had climbed up into the tree he was clever enough to stay there, liver and all, until the tortoise after a long wait, had taken himself off with the mortifying feeling that he had been made a fool of.

A rigid investigation at the dragon court established the guilt of the medusa, and as a punishment she and all her tribe were stripped of their shells, their shields of honor.

Since that time their descendants have wandered through the sea as helpless masses of jelly, far from the palace of the dragon king, from which they are banished forever.—From the German.

A Briton's Idea of Freedom.

"I never go to Washington that I do not think of a young Englishman who went around the city with me a dozen years ago," said a man who had just returned from the inauguration ceremonies. "We saw everything that there was to be seen. He was pleased with everything and said so; but the thing that impressed him most was the lack of formality and the absence of guards.

"He never tired talking of this and comparing the simplicity of the arrangements in Washington with the way the rulers of Europe are guarded. Particularly was he impressed by the fact that any one who wishes was allowed to go into the White House grounds, and wander around without showing any passes or credentials of any kind. "Well, one day we were wandering around and we went up past the White House. The Englishman stopped and watched the stream of men and women going into the grounds.

"By Jove," he said, "it is wonderful and no mistake. Why, they let you do just as you please. Do you know, I think that if a fellow wanted to he could go in there and roll over on the lawn and there wouldn't be a person who would think of speaking to him about it." "Of course no one would speak to him about it," I said. "What's more, if you want to do it I'll stay here and watch you, and if any one does say anything about it I'll help you lick him."

"Will you?" he said.

"I mean it," I said.

"He looked at me for a minute and then walked into the White House grounds. There was a crowd there, but no one paid the least attention to him. He went out on the lawn, right in front of the main entrance to the building, and lay down flat on his back. Then he rolled over three times, slowly and deliberately. Then he got up and walked out of the grounds, as happy as though he had found \$10.

"No one looked at him, and no one spoke to him; to roll over on the White House lawn might have been the proper thing to do so far as the attention that it attracted went. The Englishman said that if he had acted that way in any of the capitals on the other side he would have been locked up as a dangerous character. He was very proud of his exploit and I suppose that he is still telling the story of it in England."—New York Sun.

HEART PALPITATION

Nervous fluttering or severe heart throbbing is an indication of disorder in the digestion.

PRICKLY ASH BITTERS

Is a valuable remedy in such cases. It cleanses and strengthens the stomach, liver and bowels, removes the cause of the heart symptoms, promotes digestion, builds up a strong and vigorous body.

Sold at Druggists.

Price, \$1.00.

"Aguinaldo" Eats Macaroons.

"It was in London," said the Girl, tossing down the little book, "that I made my last soulful entry. At the table next to us at a London restaurant sat a female missionary from Manila, bringing home with her a boy Filipino, evidently as an awful example of the table manners of that country. The missionary was a short-haired lady, who wore, among other remarkable things, a sailor hat and big spectacles. Her cloth gaiters persistently toed in; but she beamed with pride as she gazed upon her convert. As for the convert, he looked like a miniature edition of Aguinaldo and ate like a pet coon. That night we had macaroons. Now, little Aguinaldo reasoned that he wasted valuable time by chewing his food, so he bolted the macaroons as he had successfully gobbled the fore part of his dinner. Whether he did not get the right twist, or whether the macaroons were not boys' size I shall never know. I only know that he suddenly stopped, gasped distressingly and rapidly grew black in the face. The missionary lady leaped to her feet and pounded the back of her redeemed heathen till she herself became hatless and bereft of her spectacles. The head waiter pranced over and banged the Filipino's hunched shoulders till it sounded like a drum corps. But his beady eyes only bulged the more. Then they carried the boy and his macaroon out into the hall, where the head waiter swung him by the heels till a yell popped from him that reassured us. But the missionary lady never forgave me for the grin she saw on my face when it looked as if little Aguinaldo's sweet young life was about to be cut short by a macaroon."—Caroline Lockhart ("Suzette") in New Lippincott.

Insure your health in Prickly Ash Bitters. It regulates the system, promotes good appetite, sound sleep and cheerful spirits.

Are You Going

to San Francisco with the Epworth League? The Union Pacific will run Special Tourist Sleeping cars every day from July 6th to July 13th, Topeka to San Francisco without change. Rate \$5.00 for double berth. The round trip rate will be \$45.00 and tickets will be good till August 31st, 1901. Stop-overs may be secured at and west of Denver. For other information see your nearest Union Pacific Agent.

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SCHOOLS.

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Chillicothe School of Oratory.
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KANSAS FARMER.

Established in 1863.

Published every Thursday by the
KANSAS FARMER CO., - - - TOPEKA, KANSAS.E. B. Cowgill.....President
J. B. McAfee.....Vice-President
D. C. Nellis.....Secretary and Treasurer

SUBSCRIPTION PRICE: - \$1.00 A YEAR

E. B. Cowgill.....Editor
H. A. Heath.....Advertising Manager

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 Address all orders:

KANSAS FARMER CO.,
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.

David Rankin, a farmer and stock feeder of Tarkio, Mo., has authorized the directors of Tarkio College to draw on him for \$50,000 and has offered further to duplicate all gifts to the college to the amount of \$50,000 more.

It is stated that Warden Jewett, of the Kansas penitentiary, will go to Yucatan in July or August and purchase \$120,000 worth of sisal, with which to resume operations at the binding twine plant. The results reported for this year's operations are a big reduction in the price of twine and a profit for the State.

A correspondent inquires when to sow buckwheat, and how much seed to use to the acre. Buckwheat is a rare crop in Kansas. Our climate is not suited to its development. It does not fill until the nights become cool. In regions where buckwheat is grown sowing is deferred as late as possible to mature the grain before frost. The first half of July would probably be as favorable a time as can be selected in central Kansas. The amount of seed recommended varies from 2 to 3 pecks per acre.

Samuel Detweiler, a successful farmer of Brown County, Kansas, suggests that it is time for the farmers to protect themselves against the visitation of the fly next year, and recommends cutting the wheat high, leaving plenty of stubble; then when stubble is dry to burn it. In fields where there are so many weeds that the stubble can not be burned. Mr. Detweiler says the best plan is to cut the weeds and stubble with a mowing machine, letting the weeds lie until they are dry and then burn. He says this will kill the fly effectually. Good results have been reported by farmers who last fall pastured their wheat heavily. Judgment is necessary in applying the pasturing remedy, but when there is a rank growth of wheat a good deal of beef and butter can be made in the wheat fields with advantage to the wheat.

PLOW EARLY.

By the time the sound of the harvester has fairly ceased, even before the thresher shall have begun to raise the dust, the plows should be started wherever suitable conditions of soil prevail. If there is sufficient moisture in the soil so that it plows well, that moisture ought to be saved for the next crop. If the stubble be left unplowed the weeds and the hot suns and winds of July and August will probably carry away all remaining moisture. The rains will to a large extent run off while the portion that enters the soil will be exposed to the thieving propensities of the sun and wind. On the other hand the soil that shall have been plowed and harrowed, and again harrowed after each rain, will be in condition to store most of the rain that falls and to save from loss most of the moisture stored. In case the land can not be immediately plowed—and most farmers will be unable to turn over the entire stubble fields immediately—the disk harrow may be used with advantage before the plow. Disking puts a check upon the growth of weeds and produces a mulch that is a valuable protection against evaporation. Disking may be done when the soil is too dry and hard to admit of plowing well. Disking land stores far more moisture than undisked stubble.

The best wheat crops are produced on land which is plowed soon after harvest and afterwards stirred with the harrow frequently until seeding time. But every observer who has at heart the best interests of the farmers of Kansas hopes to see a large proportion of the stubble in the eastern half of Kansas plowed early, harrowed frequently, and sown to alfalfa during the last half of August. In all eastern Kansas this plan seems to make sure a good stand of alfalfa. A word of caution as to the young alfalfa may be needed by those who have had no experience. If the soil be in good condition and the fall favorable the alfalfa will make a surprising growth. The inexperienced may imagine that it will be just as well to use some of that fine pasture. If the pigs shall have had a taste of it they will approve this opinion. But don't pasture that alfalfa either this fall or next spring. Let this fall's growth protect the crowns of the roots. Let the alfalfa grow all it will next spring until 5 or 10 per cent of the blossoms are out, then cut. Don't delay the cutting under the delusive hope of getting more hay by the delay. A little more fiber can be secured in the first crop by waiting until half the blossoms are out, but the hay will have less feeding value than if cut early, and the second, third, and fourth crops will not be so good.

Kansas land yields more dollars per acre when producing alfalfa than when in any other crop, and instead of growing poorer year by year it improves in fertility with every crop.

Plow now for alfalfa.

ALFALFA AND SHORTHORNS.

The prejudice against a farm with hills was largely obliterated from the mind of the writer last Monday on seeing a thick second growth of alfalfa 2 feet high covering a hillside on the McAfee farm 3 miles west of Topeka. This particular piece had been used as a hog pasture until it was thought the stand had been ruined. The appearance of ruin was completed early last spring by tearing the entire piece up with the disk harrow. This rough treatment restored the stand, produced a good crop of hay in May, and now another crop is ready for the mower. This has not been a favorable season for some kinds of grass, but this alfalfa hillside appears to have swallowed up the heavy rains of the early spring and the plants are now luxuriating on the moisture stored in the subsoil.

One crop of the best hay in the world has been in the barn for 3 weeks. Another crop is ready, and, should there be no more rain, the present rate of rank growth will surely make a third crop, while, with even half of the usual precipitation of the late summer, a fourth crop will be a certainty. Hilly land is all right for alfalfa.

While at the farm the heat of the day did not prevent a look over the herd of Shorthorns. Four cows, which \$4,000 would not take away from the place, are there that constitute a pretty good show if there were no others, but there are 32 animals in the herd, and the inclination to enlarge the herd is very manifest. Cruickshank blood predominates, and the almost universal red color gives an appearance of uniformity which has cost money, and, as fashions are turning, will bring good returns.

It used to be said of the elder McAfee

that he was captivated by a good horse. He likes a good horse yet and shows with a good deal of pride the breeding stock which yields heavy drafters. But it is evident that the money getting power of the fine red Shorthorns brings a good deal of admiration for their straight backs, full loins, and other characteristics which improved stock has made familiar.

WILL ADD TREES TO MORE FREE SEEDS.

Is the free seed bureau of the U. S. Department of Agriculture to develop into full fledged paternalism? A statement from Washington says that Congressmen who have experienced difficulty on account of the small number of seeds allotted to them will probably be glad to know their allowance this year will be practically double that received previously. In addition to doubling the allotment of seeds each Congressman will have 50 trees at his disposal. They will be of different varieties, selected particularly with a view to suiting the climate in which they will be grown. Many of these will be nut trees, such as pecans and other varieties which will grow in this country. Secretary Wilson determined to distribute trees with a hope of implanting a love of trees in the breasts of the people and inciting them to follow the example set by the department as well as to have a permanent showing for the money expended. In addition to the trees distributed 38,300,384 packages of seeds will be distributed. Each Congressman will have at his disposal 14,000 packages of vegetable seeds, of 400 of flowers, 110 of tobacco, 40 of cotton, 30 of lawn grass, 25 of sugar beets, 50 of forage crops, 220 bulbs, 150 strawberries, and 40 of grapes. The strawberries will be of new and rare varieties and the grapes are yet to be selected.

Smoke Weed.

EDITOR KANSAS FARMER:—Enclosed find samples of weeds, or grasses, that seem to be taking the grass lands of Smith and Jewell Counties. Old settlers have informed the writer that it is only in recent years that this weed has become prevalent. It does not seem to have very much power with blue stem grass, but seems to be able to drive out buffalo grass with ease. No one seems to know the name of the weed or how to eradicate it. Please inform me through your valuable paper the name of the weeds or grasses, and the best means of getting rid of the same.

S. W. KNEPPER.

Lebanon, Kansas.

ANSWER BY PROF. SMYTH.

EDITOR KANSAS FARMER:—The gray weed you enclose from Lebanon is a common wild plantain, (*Plantago gnaphaloides*), that goes by the name of "smoke weed." It grows on barren, dry hillsides all through central and western Kansas; and at a distance, where abundant, gives a gray color to the landscape. It is said to be the cause of the name of the Smoky Hill river. It is a harmless plant. It does not kill out the buffalo grass; it does not grow on the flat, rich prairies where the buffalo grass thrives. It does grow on the dry hillsides where the soil is thin and where the buffalo grass does not do well.

Your correspondent need not fear it; it requires no special effort for its eradication. There is a variety of this weed, (*Plantago aristata*), a very similar looking plant, with long, sharp-pointed bracts among the flowers, that will grow in plowed fields where it is neglected to some extent; and this also grows in the same territory where the other one is found. Possibly your correspondent may have seen this long-bracted kind in plowed fields and may have mistaken it for the smoke weed. Only one kind was enclosed in the letter.

The plant is related to the common plantain or rib-grass, (*Plantago major*), of the door yards; but does not grow in cultivated grounds.

B. B. SMYTH.

Curator Kansas Academy of Science.

Extension of Rural Free Delivery of Mail.

EDITOR KANSAS FARMER:—Can anything be done through or by the agricultural and farm press of the Trans-Mississippi States to secure a strong recommendation to a closer adherence to the policy of the Postoffice Department in favor of rapid extension of the free rural mail service to the farmer at the Trans-Mississippi Commercial Congress at Cripple Creek?

Blackwell, Okla. T. N. ATHEY.

The agricultural press of the entire country is a unit in favor of rapid ex-

tension of the free delivery system. Whether rural interests will be largely represented at Cripple Creek can not be determined at this date. There is nowhere any opposition to the extension of the system of rural free delivery and since the system has proven economical for the government it seems to be only a matter of arrangement of details to have the system extended to all thickly settled farm communities. It is probable that if the matter shall be brought before the Trans-Mississippi Congress in the form of a resolution the extension of free delivery can be given considerable impetus by showing public benefits.

But the most effective way for any community to proceed is by petition to the Postoffice Department forwarded through local postmasters.

At the Pan-American.

To hold a great exposition like the one just inaugurated at Buffalo, is doubly interesting at this time, coming as it does after the war with Spain; our victories in the Philippine Islands, and our diplomatic relations with China, all of which give greater breadth and scope to the American idea of government as recommended for the guidance of our new possessions.

"To the victor belongs the spoils," but in this instance the case is not one of spoils or conquest, but that of liberal measures and self dependence. By the negotiations of peace and the mutual arbitration of differences, the power that stands victorious has the initial right of extending her trade and commerce over more widely diversified fields. To carry our surplus productions to other countries calls for more railway equipment and construction, more ocean liners, more manufacturing machinery, all the newest appliances, a greater force of men, and consequently more of the necessities of life to sustain them.

In view of the events that have transpired in the last three years, all our new inventions and discoveries are being exhibited at the Pan-American, where the visitor can see the advance made since the Columbian in 1893. By the first of July everything will be in readiness for those who contemplate visiting this great aggregation of American genius and handiwork.

The student in any walk of life may here find the mecca of his or her ambition or desire, from the latest chicken incubator to the gigantic electric motor, or the most formidable guns used in the army and navy. Not so immense as the Chicago Exposition, but the arrangement and colors are more pleasing to the eye; besides this in a few weeks the flower gardens, which adorn every nook and vacant spot, will be very beautiful, filling the air with fragrance. By a lucky stroke of forethought, small, quick-growing shade trees were planted around the grounds and walks. As stated in my other letter, Kansas is scarcely represented except by an occasional sunflower badge worn by members of the press, who held their meeting here last week; and had it not been for this display of our State flower, Kansas would have been relegated ingloriously to the rear. Through the courtesy of Mr. Mark Bennett, Superintendent of Press Department, members and representatives of that fraternity were presented with passes to the grounds, which also admitted them to nearly all the shows in the midway.

As usual, California takes the lead in horticultural exhibits, making the best display very likely ever seen. Ontario makes a creditable showing when we consider the northerly location of this province. Many of the South American countries have shown good taste and enterprise in arranging their exhibits, clearly indicating that customs and habits of the United States are drifting to the South as well as in other directions. In the U. S. government building many new exhibits are seen, every department demonstrating the fact that "Uncle Sam" is always on the alert to scatter his latest development to the sovereign people in every part of the land.

If all the signs recorded here were read and understood, every class of people would be benefited in the way of health and the understanding of national laws.

A. E. JONES.

Buffalo, June 17.

Uses of the Day.

"The proposition to abolish ladies' day at the club was voted down."

"Yes?"

"Yes; it develops that there is hardly a member who does not, in point of fact, enjoy meeting his wife occasionally."—Detroit Journal.

Grain Markets.

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

Grain Markets to June 25, 1901.

The glowing crop prospects together with decreased export demand caused a farther decline in wheat during the week just past. Commercial statisticians out-herald the government crop experts in predicting the largest wheat yield in the history of America. Statistician Snow of "Orange Judd Farmer," predicts a 775 million bushel wheat crop, and other authorities make it still larger. Under these circumstances it is not surprising to note that wheat has been on a continual toboggan slide closing at a lower price each day than it did the preceding one.

The July option that sold in Chicago the first of June at 79½ cents sold at 66 cents to-day, a decline of nearly 14 cents per bushel. The foreign crop situation is not nearly so assuring, as the following clipping attests:

London, June 24.—The Mark Lane Express to-day in its weekly crop review, says:

"The wheat in the United Kingdom has come into ear on remarkably short stems, and the ears will not fill without more moisture.

"In France the spring corn is less promising.

"Wheat cutting has begun in southern Spain. The provinces of Andalusia and Murcia expect fine yields, and the promise in central and northern Spain is excellent. The wheat crop in Central Europe is very promising on the confines of the Adriatic and very bad indeed on the confines of the Baltic, indicating that Croatia and Hungary will have a good crop, while Prussia will have a serious deficiency. Mediocre results may be expected in Bavaria and Austria."

Under these circumstances we do not think it the part of wisdom to take altogether for granted the rosy views of domestic crop experts, who usually are in the employ of manipulators.

It is quite a long time yet until a spring wheat crop will be assured. Corn and oats remain without any material change.

The markets closed to-day as follows:

Chicago.—No. 2, red wheat, 67c; No. 2 Kansas hard, 66-67c; No. 2 corn, 43½c; No. 2 oats, 28½c.

Kansas City.—No. 2 Kansas hard wheat, 63½-64c; No. 3 Kansas hard wheat, 62½-63c; No. 2 corn, 42c; No. 2 oats, 29c.

Can Use Capital With Great Advantage.

ISAAC H. FRENCH & CO., WHOLESALE GRAIN DEALERS, ROOM 5, IMPERIAL BLDG.

Champaign, Ill., June 22, 1901.

Mr. F. W. FRASIUS, Topeka, Kans.

Dear Sir:—I see by the papers that you have been elected manager of grain department for the Farmers' State Co-operative Grain & Live Stock Association, and for once I believe they have put the right man in the right place, as the schooling that you have had in so many years active service along this line has made you thoroughly acquainted with all the details of this intricate business. I see the organization has only subscribed a capital stock of \$20,000; this I deem very much too small a capital for the vast amount of business that the farmers of the State of Kansas will need to handle, when they consider that the wheat crop alone will require something like \$60,000,000, they ought to see that to make a success of handling it in competition with the vast capital that will be arrayed against them they ought to have at their command in the banks of Topeka, at least \$250,000, and they ought to have an elevator there with a capacity of at least half a million bushels; this would enable them to carry a constant stock of 300,000 to 400,000 bushels of wheat, whereby they could fill an order of a half million or a million bushels for the seaboard of Europe, as fast as cars could be procured to transport it. It would also give them a supply of 50,000 or 100,000 bushels of any kind or quality of wheat that the State of Kansas grows, which would enable them to fill any mill order that would come within their reach. You understand if a mill wishing 100,000 bushels of a certain class of wheat would find that they could get it, and it was all in store in Topeka ready to be tumbled out into cars, they would send a man right there with power to buy and inspect it out before he left the city. Then, with these accumulations of wheat on hand, it would enable you to say to the railroad companies,

we are ready to give you 100 to 500 cars of grain to a certain point at a certain rate.

Now, this matter of capital could be overcome somewhat if the company had an elevator at Topeka and the farmer associations would consign their wheat to Topeka to be bunched up into large quantities of the same kind of grain, and the manager there sell it for the shipper in these large quantities. In this way \$50,000 or \$100,000 would go a good ways in paying freights and paying for such grain as would be offered them on the market, and enable them to compete with the large capitalists of Chicago and Kansas City. Let the farmers put up a capital of \$250,000, which seems to me they could do without any sacrifice. They ought to get a corps of officials to handle the business at Topeka that would not only return them in dividends the 1 cent per bushel they allow the central office for handling their wheat, but give them a dividend of 20 to 25 per cent per annum on their capital stock. With a capital of \$250,000 the farmers could sell their grain to the millers and retail dealers of Europe just as well as to pay four or five commissions to the middle men for doing the same work. You will need a very wide awake and competent man in Chicago to hunt up all the representatives from Europe sent over here to buy wheat, so as to be in constant communication with them.

What Phillips did towards advancing prices in oats and corn, your association ought to be able to do in wheat. I have always felt a great interest in the farmers, and I sincerely trust that they will make this co-operative effort a great success. "In union there is strength," and these great combines that are forming at the present day conclusively prove the truth of this old adage. I shall watch the organization and trust that it will be a great power for good, for the purpose for which it is organized. Very truly yours,

J. H. FRENCH.

Farmers Beware.

Farmers beware of the tactics of the Grain Dealers' Association. At some places in the State advantage has been taken of the sentiment in favor of co-operative handling of grain; organizations perfected, and instead of becoming members of the Farmers' Co-operative Grain & Live Stock Association, they have applied for membership in the State Grain Dealers Association. This every patron should know and will know in time. If this is not known by the directors, it is time they were making a close examination into the acts of their manager. Our advice to each farmer is to ascertain whether you are forming a company to assist the grain dealers or whether your organization is going to assist the farmers. If your local organization is not pledged to become a member of the Farmers' Co-operative Grain & Live Stock Association my advice to you is to let it alone.

"Kansas Grain Men Held Secret Meeting."

"Special to the Topeka Capital."

"Hutchinson, Kas., June 20.—The Kansas Grain Dealers' Association held a meeting here last night. Their meeting was held behind closed doors. They said the principal purpose of the meeting was to consult regarding cars. Last year they had a car famine. This year they desire to get more cars, and want to know just how far the new car law requiring registration of cars to be furnished to all in order of application. How this will effect them as against the individual shipper and other matters of interest to grain men were discussed."

The above is interesting reading! Their meeting was held behind "closed doors." This sounds nice, does it not? Behind closed doors! It is not necessary to meet behind closed doors for the purpose of obtaining cars. The meeting was held behind closed doors to devise ways and means to skin the farmers out of their wheat crop.

Now contrast the farmers' meeting at Salina in their endeavor to get fair play and better their condition; the farmers meeting, even when organizing for the purpose of effecting a grain shipping association, was open to the world, doors wide open, everybody invited in and everybody that wanted to come in—no secrets, but honest, straightforward business.

One of the patriots, when affixing his name to the Declaration of Independence, exclaimed, "Boys we must stand together or the British will hang us separately." So with the farmers, they must cooperate to protect themselves against trusts and combinations. The principal of cooperation is right, and

when properly managed can not fail of its mission. In the State of Kansas alone millions are annually saved through cooperation on life insurance and thousands upon thousands of dollars are annually saved on fire insurance, although cooperative fire insurance is yet in its infancy.

Is it possible that farmers who are ever close to nature can not learn from nature? The lone tree on the prairie unless nursed by the hands of man is sure to be a craggy one; on the other hand the plum bushes along the ravines are never growing singly and alone, always in thickets, thus protecting one another in accordance with nature's laws.

The wolves of the western ranches hunt in packs, and the colt straggling away from the herd soon becomes their prey.

It seems nature has pointed out the way, why does man hesitate to protect himself?

Notice.

If you desire a speaker to assist you in perfecting a local Co-operative Shipping Association you should correspond with me, and I will arrange dates and supply you with an organizer. Write me suggesting dates that will suit you best. It is well for you to give three or four dates so that we can fix a date that will not conflict with other meetings. If you are ready to organize, or have organized, and want a speaker at small expense to assist you, let me hear from you.

The following feature in our new railroad law is of great importance to farmer organizations, wishing to build elevators or obtain side track facilities:

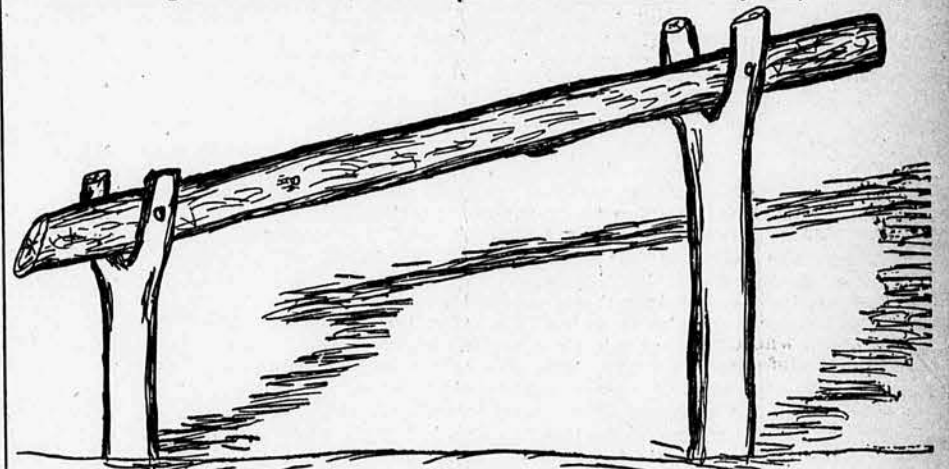
Section 12. Any person, upon written permission of the board, may exercise, in the same manner and to the same extent as is now enjoyed by railroad companies, the right of condemning and appropriating land and laying out and constructing any spur, switch, or railroad track thereover, and connecting the same with any railroad already constructed; and the right to use such spur, switch, or track shall be public, at rates and on terms and conditions such as the board shall prescribe, if the parties interested can not agree. Provided, that no such connection shall be made with the main track of any railroad between stations without the consent of such railroad company.

By carefully reading the above, farmers and others will find their remedy, if refused elevator sites or side-tracks by the railroads.

A Good Thing for the Cattle.

EDITOR KANSAS FARMER:—I enclose a sketch of a cheap arrangement for a cattle rubbing place, where there is no timber in the pasture. One end should be as high as the larger cattle require and the other end sufficiently low to accommodate the calves.

It does one good to see them scratch



Arrangement for cattle to scratch their backs.

their backs and they seem to enjoy it. A suitable point to erect it is near the watering place.

The timbers must be heavy enough to withstand the pressure as a full-grown steer bows up his back and rubs back and forth under the horizontal pole. The material can be obtained easily in almost any bunch of native timber. The horizontal piece must be securely fastened to the uprights by a bolt or pin or wire well wound about. We have tried this and it is good enough to tell about.

ELVEN C. TREMBLY.

Comiskey, Kans.

Choosing a Captain.

Where several years go the fishing for the supplying of the Honolulu market was done almost exclusively by the natives in their canoes and a few

Chinamen now the bulk of the work is done by the Japanese, who are at it in great numbers.

The boats which they use are built here after patterns used in Japan, and once in a while an oriental steamer arriving from the west brings an imported fishing boat, which the fishermen think is superior to those of local manufacture. The boats are of a peculiar shape and are of different sizes, some able to accommodate but three men, which is an ordinary crew, and others are large enough for seven or eight men.

Now that the fish are getting scarcer it is necessary for the fishermen to go farther for their catches than was formerly necessary, and very often these apparently frail and cranky looking boats go nearly to Molokai and Makapuu Point, where the fishing is good. Only the larger boats are used for the deep-sea fishing, as they are sometimes out several days and must have room to carry the fish caught and provisions necessary for the trip.

Notwithstanding the frail appearance of the boats, they are strongly constructed and good sea boats and as a usual thing are fast sailers.

On Punchbowl street, in Kakaako, a great many of the boats are built, and the launching of one of the larger kind is always an event of a great deal of interest to the onlooker and of great importance to the men who are to operate the boat. When the boat is completed the owners and builders and their friends decorate her with Japanese flags, lanterns and flowers. Then they take her to the water, into which she glides amid the shouting and hallo-

Up to the time that the vessel is launched there is no captain selected for the boat. The choosing of this important factor in every case is left until the boat is in the water. It is known who the members of the crew are, and from them the captain is selected. A knowledge of seafaring is not apparently necessary for a man to be a captain of a Japanese fishing boat, as the following will show:

When a boat is in the water and moored securely the members of the crew, who are generally the owners of the boat, strip themselves and get into the boat. Then the fun of making the selection of the commander begins. There is no voting or drawing of lots to settle the matter. At a given signal from one of the crowd on shore, who are watching, the men in the boat begin with all their might to try to throw each other out into the water. Each man is against the other, and so the struggle, as a usual thing, lasts a long time and is remarkably exciting. All the time the play goes on the friends of the contestants yell words of cheer to the struggling men in the boat and throw buckets of water on them and into the boat, seemingly with the idea of making the battleground more slippery as well as refreshing to the men at work. As soon as a man is thrown out of the boat he must stay out, but may

assist with water if he so desires. The man who stays in the boat longest, or rather who is able to put all the others out of the boat, has by his prowess shown himself competent to be captain, and so he is greeted with much applause and showered with congratulations at the termination of the scuffle. There is no appeal from the selection so made, and the man so chosen continues to be captain until he voluntarily retires or sells out his share in the boat.

The novel way of getting a skipper seems very satisfactory to the fishermen, and it certainly affords a great deal of amusement to strangers who happen to be about during the selection of a commander.—Honolulu Republican.

Subscribe for Kansas Farmer.

Horticulture.

Past, Present, and Prospective Horticultural Work.

C. H. VAN HOUTEN, SECRETARY IOWA STATE AGRICULTURAL SOCIETY, BEFORE THE WYANDOTTE COUNTY AND THE MISSOURI VALLEY HORTICULTURAL SOCIETIES.

Conditions change, experiences are gained, opportunities present themselves, and the important matter for consideration is to do the things that are best calculated to meet the present and future requirements. In pioneer days the first consideration was to obtain shelter from the winter wind-sweep and the heat of summer. Then the cottonwood and the soft maple were prime favorites, for the reason that they could be depended on for quick returns. A further consideration was that they were at hand, of easy propagation and could be had with little outlay of time and no expenditure of money. Later, the box elder and other coarse trees were added and more of a variety was noticeable. In early days the fruit, if any, was gathered from the thickets and, at a later day, the few fruit trees that were planted were of few days and full of trouble, as a rule, but the few specimens that escaped gave hope of a better horticultural day. It is true that test winters and other causes tended to make fruit growing a failure, but when we consider the distance from nurseries in early times, and the lack of transportation facilities, it is no wonder that there were failures.

Not all the failures of varieties was due to misrepresentation of agents and dealers, for many desired the favorites of early years in the old eastern home and planted them, even after experience demonstrated that they were not reliable. Again, many nurseries in the East sold trees to the West that had proven failures there and were destined to be greater failures here, but through it all and out of it all, a few successes rewarded the labors of those who planted trees.

IOWA HAULED APPLES FROM MISSOURI.
Among my earliest recollections in fruit, were the times that the apple wagons from Iowa would return from Missouri with nice, juicy apples. It mattered not that they were hard and sour, for were they not better than the wild crab apples? Then there was the rarity, the relish of youth and the keen appetite whetted by only an occasional taste of real apples. Of course in that long ago there were no orchards in southwestern Iowa and but few in northwestern Missouri or Kansas, but the desire for fruit, the energy of the people, and the developing conditions soon changed all this, and orchards were planted on most farms; groves were planted and even timber plantations were made, until many farms looked, at a distance, as if they were wooded preserves.

THE PRESENT.

But why dwell on the past? It is history and you know it as well as I do. We are not yet old enough to love to dwell on reminiscences and the present is of more importance. Yet the past, and the experiences of the past, should guide us to correct work, and, insofar as that is the case, there is value in history. The present and the recent past are of more value to us than the historic past, and the progress that has been made indicates that advantage has been gained from the things that have gone before. It is not intended to make lengthy remarks as to the mistakes of the past, but that mistakes are and have been made no one, it is assumed, will dispute. A too common mistake made by planters is to plant of some variety that has borne the past year. This information is fresh in the memory, the more remote past is forgotten, or the memory is so dimmed that it does not leave sufficient impress to make us careful. Another common mistake is to give too much credence to enthusiastic propagators, who, having planted in hope, watch their new varieties with the favor of fond parents and overlook defects and magnify good qualities until a real knowledge of merits can only be learned by actual experience or observation. Another too common mistake is to try to secure something new or something that others do not have. Of course variety is the spice of life, but for the fruit grower, in actual production and especially in keeping and marketing varieties of fruits, a multitude of varieties is an aggravation and an expensive experience.

INTENSIVE VS. EXTENSIVE OPERATIONS.

Again, the desire to express one's operations in acres or thousands; in other words, the desire for extensive oper-

ations rather than in intensive work is a too common mistake of the present and recent past. It is better to speak of satisfactory results and profitable investments, than to be able to say that there are so many hundreds of acres in an orchard. Not that large plantings should be discouraged, but rather that good work should be encouraged regardless of the size of the orchard, vineyard, or berry patch. A profitable result is the end sought, and the work should be so done, and the business so managed, that there is a balance on the right side of the ledger. It is true that there is room for amateur work; that is for those who, having made money in other lines, desires to spend it in horticultural work or the exercises of a fad, or the working out of a fancy. It may be that the object lessons in such cases will be of more advantage to the observer than to the promoter, but where money is not the object then the financial side need not be considered.

LOOK AT THE HOME SIDE.

It was not the intention, however, to consider the question from the commercial side, but to consider it from the standpoint of the home maker. The commercial fruit grower would require the experience of one on similar soils, with like climate and under similar conditions, but from the view of the home maker there are so many things that the experience of any one may be valuable that it may not be out of place to offer some thoughts and suggestions. It is plain that many people have made mistakes, from the amount of changing that is being done. Some set out too many trees and they are cutting down part of those supposed to be needed when set. Others are cutting down, not because there were too many planted, but because better varieties are desired. Some made defective plans and are trying to correct the mistakes of former years. If all of these experiences could be placed before prospective planters and they warned of the mistakes of others, they could so change their plans as to at least come near making ideal homes and surroundings. The misfortune is that but few can begin anew and plan and plant as they should desire, but must accept the faulty plans of others or be hampered by the mistakes that they themselves have made. In beginning it is often a difficult matter to decide to remove the old and coarse varieties growing, so as to secure proper conditions for the new and more desirable varieties, or the old varieties that are better adapted to the purposes intended than those now growing. It is quite necessary, however, to use the ax and resolutely clear out the ground if incumbered with undesirable kinds so as to have congenial place for the new.

PRIMITIVE HORTICULTURE MUST PASS.

In early days but little thought was given to the aesthetic side of horticulture. Either shade or protection was sought or in addition to these fruit was desired and the plan and plantings were arranged with the object of speedy return. Now, and especially will this be the case in the future, the ornamental nature of the varieties will be considered. In order to do this properly the whole view must be considered, not only the trees and shrubs but the buildings, the lawn, the farm, the garden, in fact all that combines to make an ideal home. With what pleasure the traveler in Japan views the successful attempts to utilize the small places by planting trees, shrubs, and flowers. There even the little patches of ground, often but a few square feet in area, shelves on the sides of the houses, windows and roofs are used for fruit and flowers and the vegetable gardens and often the grain crops are grown on such restricted areas as to suggest the idea of toy or play gardens, while we in the United States allow waste places enough, if properly planted and cultivated, to nearly feed our population. Our rich soil stimulates rank growth of weeds and so these waste places, in addition to being useless are a nuisance in the production and dissemination of noxious weeds. Even in our towns and villages there is room enough, if properly utilized, to provide much of the small fruit and even vegetables for the people. If the yards and lawns were kept in grass and properly cared for this would not seem like such a waste, but often it happens that waste places are found in our towns as well as in the country. Of course, with the advancing price of real estate and the constantly growing tendencies to increased taxation changes for the better will be observed, but the improvement is not coming as rapidly as it should. I have noted with pleasure that Kansas

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City has taken an interest in lawn improvement and there are many towns and cities that are organizing improvement associations for the purpose of ornamenting their respective corporations and reclaiming the waste places. But, however meritorious these efforts may be they can not bring the general improvement desired, so appeal must be made to individual land owners for the improvement of their holdings. It should be a matter of pride and will be a matter of interest and profit, if waste places are reclaimed and utilized for the growing of trees, shrubs, fruits and flowers, but if nothing better can be done it is well to seed to grass and if no better use can be made it will afford pasture for animals or play grounds for children and the change will be appreciated by the passer-by. Those who plan and plant for the good of others are benefactors and in the coming years they will get the credit they deserve. The art of the horticulturist is the art that mends or improves nature and it should be a matter of pride for the devotees of the art to prevail on others to do the things that will advance the cause.

WHAT OF THE FUTURE.

It would take a prophet to foretell the future, but let us hope that the things so much desired will come, but in order to do this we, as societies and individuals must, by precept and example, do our part. This does not mean that the commercial horticulturist shall be discouraged, for there is a place for all, but it should mean that the planter for the home should be encouraged. He may not be seeking as diligently as the extensive planter, but he is in a receptive mood and if the information is given him he will utilize it in planting to provide fruit for his family, with trees, shrubs, and flowers for adornment, with vegetables to supply his table, thus enabling him to live better, cheaper, and at the same time, with little or no trouble or expense, contribute to the pleasure of others, for it is a matter of small outlay to have all the things really necessary to provide the home with the desirable things in the way of fruits, ornamentals and vegetables.

BRIGHT PROSPECTS AHEAD.

If, by profiting by the mistakes of the past, we can give correct directions for horticultural work, so as to save many of the losses and mistakes, we will do much good, for that there is need of correct information there can be no doubt. The future holds out bright prospects and, if all will work for the desired end, there will be such advancement that the near future will show satisfactory results. There is no country on earth that has the same high rate of intelligence; there are none who have better means or more incentive to do correct work. In the past, necessity and lack of information combined to limit the work, but with the increased financial ability, with the better information, and with the wide observation, afforded by the increased facilities of travel, we are warranted in the belief that more rapid progress will be made in the future than has been made in the past. It should be urged that every land owner, and especially every farmer, should have an orchard, a small fruit plantation, a vegetable garden, and a well-kept lawn. It pays in satisfaction, aside from the fruits and vegetables that supply the home and add comfort and luxury to the living. This need not involve large outlay of time or money, but it does mean intelligent application. Every

horticultural society and nearly every neighborhood has one or more men who are able and willing to give advice; the object lessons all over the country afford examples of successful work, and, while it is not expected that any one should attempt to copy or duplicate the work of others, yet each successful planting should afford hints to desirable work along the same lines. The difference in grounds, the difference in buildings, the taste, and financial ability, will in each case, in a measure at least, determine the work to be done and suggest changes from any work taken as an example. Few will be interested in large commercial transactions but many, in fact all, should be interested in home adornment and the motto should be more intensive work rather than extensive work.

As there are city improvement associations there should be home adornment associations, and there should be a candid consultation among the members as to how to best advance the good work.

(To be continued.)

A Joint Horticultural Meeting.

The Wyandotte County Horticultural Society and the Missouri Valley Horticultural Society held their union meeting and picnic at Kerr's Park, just west of Kansas City, Kans., on Minnesota Avenue, Saturday, June 15. J. L. Williams and W. T. Hovey, president and secretary, respectively, of the Wyandotte County Society, were on the grounds early in the day preparing the table, etc., which the ladies later filled with a bounteous dinner. The first on the program was this dinner, which was spread before upwards of 50 people. At about 1.30 o'clock, the dinner having been cleared away, Mr. Williams called the meeting to order and Mr. M. E. Chandler read the report of the last meeting of the Missouri Valley Society.

Miss Elsie V. Beard read a very interesting paper on "Women on the Farm." G. U. S. Hovey gave a very interesting talk on the "Red Raspberry." He spoke of how some years back the red raspberry would not bring as much as the black, but since people have got a taste of them they will pay your own price for them, if they are properly cared for and brought to market in proper condition. A great many of the red raspberries were frozen out the past winter, especially those in the bottom and on level land. Most of those on the rough land have withstood the winter.

The principal paper of the day was by C. H. Van Houten, secretary of the Iowa State Agricultural Society and Fair Association. His subject was "Past, Present and Prospective Horticultural Work," and is published in full in this number of the KANSAS FARMER. W. J. GRAVES, Kansas City, Kans.

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In the Dairy.

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

Bill of Fare for a Kansas Dairy Cow. (Continued from last week.)

MILLET: RATION NO. 20.

This is also a crop pretty generally grown over the state. It makes an excellent hay when cut while the seed is in the hard dough stage. It is richer in milk producing elements than either timothy, sorghum, prairie hay or corn stover. Millet usually yields from 2 to 2½ tons per acre. Being especially rich in carbohydrates (heat producing element) makes it hard to get a ration from home grown crops without getting too much carbohydrates. The same grain as given for prairie hay, is doubtless the best. Millet being richer than prairie hay the amount of grain needed will be from 15 to 20 per cent less. The area required would be millet 1 acre, oats 9-10 acre, and soy-beans 1.1 acres.

RATION NO. 21.

In many parts of the state millet and prairie hay are grown on the same farm. When desired these can be fed half and half, but as both are dry feeds it is well to furnish succulence by giving 10 pounds of mangles per day per cow. These with 8 to 10 pounds of a grain mixture of 5 parts oats and 3 parts cottensed-meal. If oats are not available 4 parts bran may be used in their stead. This ration would require ½ acre of millet, ⅓ acre of prairie hay, 1-24 acre of mangles, and 1 acre of oats.

ORCHARD GRASS.

Hay from this grass is of practically the same composition and feeding value as millet and whenever desired can be substituted for millet in the rations given above.

Sorghum as a Green Feed

Growing sorghum contains some mysterious principle that under certain conditions, and with certain animals, causes death when pastured. What this is no one seems to know, but indications point to a poisonous substance of some kind. At first the injury was supposed to be confined to the second growth, but later investigation shows that the first growth is just as dangerous as the second. What the effects of pasturing sorghum may be is illustrated in the case of a creamery patron of Thomas County who recently purchased a herd of forty cows. One day these cows broke out into his sorghum patch. They were in there but a short time and yet sixteen of his best cows died. Others have reported cases where cattle were being driven along the road and died from the effects of getting a few mouthfuls of sorghum growing near the road. On the other hand there are a good many farmers who have pastured sorghum with immunity. All we can say is that the man who pastures it is running a great risk. There is no danger from feeding sorghum hay.

Sorghum is becoming to be considered a valuable soiling crop. If pasturing sorghum will kill an animal it would seem as though the same material cut and fed green would do the same thing. There is no evidence to bear out this conclusion. Of course more extensive experience in soiling sorghum may show some ill effects. Nevertheless the Kansas State Agricultural College has fed green sorghum for two seasons with no ill effects whatever. During the soiling experiment of



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1898 the agricultural college fed cane and Kaffir-corn (both samples of sorghum). These were used for thirty days, during which time 10 cows consumed 39,920 pounds obtained from an area of 1.4 acres. The grain consumed amounted to 1,386 pounds and cost \$8.14. The value of butter fat and skim-milk amounted to \$28.55, leaving a balance to be credited to the sorghum of \$20.41, which amounts to \$1 per ton or \$14.50 per acre. As with alfalfa, the main use of green sorghum to the Kansas farmer is to supplement snort or dry pastures.

D. H. O.

How to Improve the Dairy Herd. W. A. BOYS.

The statistics of the state of Kansas for the year 1900, show that the average value of the Kansas milch cow dairy products (not including the calf) is \$10.46. At the Kansas agricultural college, it was found that the feed consumed by the average cow was about \$30. This perhaps would be about an average cost for the State. One can readily see that even figuring in the value of the calf, that there would be an exceedingly small margin left for one's labor. When we know the records of cows producing as high as 400 pounds to 500 pounds of butter fat per year, it seems that there is room for great improvement in the average dairy cow. Then the question arises, how can this be done?

There are three things, which, it seems to me if every Kansas dairyman would study and practice, the average income per cow for the state would be greatly increased within a few years and the dairy herd would become a source of much greater profit.

First, when the cows have been fed a balanced ration long enough to respond to the effects of the feed (ordinarily from two to four weeks) the increase in milk flow will be considerable in some, while others will still be unprofitable, no matter how much or what kind of feed they are given. There should be some method instituted for determining the amount of butter fat each cow is producing so that these unprofitable ones can be weeded out. The best test known is a pair of handy scales for weighing the milk and a Babcock testing machine for determining the amount of butter fat contained in the milk. By recording the weights of milk from each cow daily and taking a composite sample of each cow's milk for a period of ten successive days about four times during the lactation period, it can be ascertained in the course of a lactation period whether a cow is profitable or not. As rapidly as they are found to be unprofitable, they should be disposed of. If the cow is young and in her first lactation period, one year's test will not be sufficient as she will not be at her best until about the third lactation period.

As soon as the unprofitable cows are disposed of, they should be replaced by better ones. One should not purchase a cow without knowing something of her butter record, unless from experience he is capable of judging something of the possibilities of the cow as a milk and butter producer with proper feed and care.

Second, it has been conclusively shown by experiment, that we can not raise the per cent of butter fat in milk by feed no matter what the quality or quantity of the feed. This end can be accomplished by breeding, as it is well known that some breeds of cattle have a higher test for butter fat than others. This is a quality that has become fixed in breeds by long years of breeding and selection. As one-half of the blood of the calf comes from the sire, we can at once realize the importance of having a first-class bull that has a first-class dairy record.

Third, much also depends upon the general care of the cows. By having control of the sanitary conditions—keeping pure water before them, stables clean, etc., disease can be prevented to a great extent. The importance of treating the cows kindly and preventing excitement as far as possible can not be too much emphasized. The agricultural college has shown in an experiment carried on in 1898, the varia-

tions in the per cent of butter fat that are due to excitement. The excitement in this experiment was the result of shipping the cows 100 miles. The greatest fluctuation noted was 7.2 per cent, and it was about the ninth milking before the cows were brought back to their normal test. Any change out of the ordinary about the cow yard or barn is quite likely to cause the milk to vary both in quality and quantity.

By feeding up the herd until they are doing their best and then weeding out the unprofitable cows, breeding to the best dairy strains and properly controlling the sanitary conditions and using a good supply of kindness, the dairyman can expect to have an ideal herd in the course of a few years.

Wanted—A Good Dairy Cow.

H. R. THATCHER.

Wanted—A good dairy cow. Where to get her, and how to tell when we have what we want, are the subjects of my remarks.

Every dairyman can tell which is a good dairy cow. She has a slim neck, sharp shoulders, and a rough looking, wedge shaped body compared to the beef animal. She has broad, flat hind legs, while the beef animal has massive hams. It is in the udder we notice the greatest difference, that of the dairy cow's being large, broad, and springy to the touch. There is also a great difference in the milk veins.

The average farmer, and plenty of dairymen, judge their cows by some peculiar quality besides those already mentioned. Some judge by the color of the milk, the rapidity with which the cream rises, the quantity she gives at a milking, or the test she received at the creamery.

But can you judge dairy stock in this manner? Is it possible to pick out the best cows by simply looking at them. A noted dairyman, an expert in the estimation of all that knew him, was once tempted to try his judgment by an actual test. Carefully selecting his cows, he numbered them in the order that he thought they would stand the test. To his astonishment, the cow which he had placed fifth, stood first, the second was a cow from the bottom of his list, the third his fourth, the fifth his first, and so on, everything mixed up. And still more important, this prominent dairyman actually found that one-fourth of his fine herd was not paying for their feed. Such has been the experience of others and it surely proves that you can not tell a good cow by looking at her. The Babcock test and a pair of scales are the best judges of the points of a good dairy cow, although it takes a yearly record to do it.

How nice it would be if we could combine the qualities of the dairy and the beef animals into one breed of cattle. Professor Bailey, of Cornell University, while trying to improve the hardiness and productive powers of the garden squash, thought of what a capital plan it would be to cross it with a gourd. Think of it, a squash as hardy and productive as a gourd. He tells us, that after the tenth generation, he had at last secured a squash with all the desired qualities, and such a beauty! With visions of fame as the originator of a new variety of squashes, he carried his prize to the kitchen. It cooked up fine, and as he was seated at the table, and the dainty dish went its rounds, he helped himself with greedy expectations, when, "Horror of horrors, such a taste! The gourd was still there!"

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(To be continued.)

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Contributed from various sources, including correspondence, scrap-books, and farm papers. Compiled and arranged by J. Clarence Norton, Moran, Kans.

CHAINS.

Chain Attachment.—The little implement represented in the diagram is a very handy attachment to a chain. It serves a two-fold purpose. The large portion (a) serves as a ring, while the contracted end (b) serves as a hook, catching and holding on any link required.



Chain Logging Hook.—I find the following hook handy and convenient for logging, stumping, or stoning large stones with team. It is made same as grab hook on chain, only extra heavy,



with $\frac{3}{8}$ -inch rod iron welded for handle, which enables you to lift double tree in backing up, and is fastened with clevis to double tree.

Device for Unhitching Chain.—Take a piece of $\frac{1}{2}$ -inch iron, form a hook on one end like a grab hook on a chain. In a hole made 4 or 5 inches from hook end put a strong ring to hang opposite

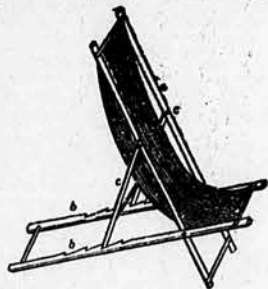


the hook, the whole about 1 foot long. Attach a team to ring and chain to hook. To unhitch simply raise the lever thus formed. It is not in the way and is something very handy.

Mending a Chain.—I found the following method for mending broken link in chain to answer almost as well as link made by a blacksmith. For chain of $\frac{3}{8}$ iron, take round stick $1\frac{1}{4}$ inches in diameter, wind 10 or 12 strands of No. 14 or 15 wire around it. When stick is withdrawn, it leaves a coil or helix of wire. Take 2 end links of broken chain, pass 1 end of the coil through both links; keep turning it until all the strands are in both links. Since the helix is perfectly round, each strand has a bearing on the links, and when pull is made, straightens out to size of other links. While pulling brush I found this of great advantage.

CHAIRS.

Adjustable Camp Chair.—It is made



of cherry or walnut. Pieces a, b, and c are 1 by 2 inches in size. A is 2 feet 6 inches long, and is bolted to b 15 inches from lower end of a. B is 3 feet 9 inches long, bolted to a, 1 foot from upper end of b. C is 1 foot 6 inches long and bolted to a, 1 foot 9 inches from upper end of a. The 2 pieces a are eighteen inches apart on inside. The seat is made of common hall carpet. By resting ends of c in different notches, any position desired can be obtained. It is easily and cheaply made, and is just the thing for hot summer evenings.

Good Bottoms for Old Chairs.—If you have any old chairs with the bottoms worn out, like cane chairs, you can give them a new lease of life in the following manner: Take a young calf skin and soak it, if dry, until quite soft; lay it on the chair with flesh side down; draw the hide tight over bottom and cut off with a pair of scissors, allowing about one inch of hide to be drawn under bottom of chair all around, and tack with carpet tacks on under side of chair. Slit skin so as to let it draw tight without gathering. Let skin on chair get thoroughly dry before using, and it will dry tight and last longer than the first bottom. I used some chairs like the above for years.

CHARCOAL.

Charcoal and Ashes for Hogs.—To

make corncob charcoal, dig a hole four or five feet in diameter, and as deep as is required to hold the necessary amount of cobs; better burn thirty to fifty bushels at a time if possible. Start a fire in the bottom of the pit, and then fill in with cobs. Cover the hole tightly, preferably with a sheet-iron cover, after the fire gets well started. Only so much air must be admitted as will admit of very slow combustion. Charcoal burnt in an open fire is not charcoal in its true sense; it contains little or no carbon, and carbon is what the pigs require. By confining the heat and smoke you get charcoal, and besides there is no danger of fire. After burning, store in barrels or other dry places. Then make a large box; cut out six inches on one side, and form in a low trough in front, preserve the cover, put in your cob charcoal; then to sixteen quarts of wood ashes put seven quarts of salt, and mix them while dry. Then dissolve in a large pail of water one and one-half pounds of green copperas, and sprinkle the mixture of ashes and salt with the copperas water, and keep mixing as you sprinkle. It is more convenient to do this upon a floor and afterward place in the box. Set the box in a dry place, inclined slightly forward so that in storms the water will only get into the trough; have your cover tight; the pigs to have access at will to the box. They will eat only when and in the quantity that their condition requires. This is one of the best health preservatives known, and if accompanied with a changing and varied diet, sick hogs will be a rarity with you.

Some Uses of Charcoal.—It is an excellent ingredient to use in poultices for malignant ulcers and old sores. It is a good disinfectant and should be kept in sick rooms. If sprinkled over fresh meat, this will keep longer. It will cleanse impure water and will sweeten the breath if used as a tooth powder.

To Make Charcoal for Medicinal Uses.—Take an empty cotton reel or a piece of the stem of a broom. Put it between the bars into the glowing coals. Take a basin of cold water and hold it near the bars. When the wood ceases to flame and is red, take it out with the tongs and put it instantly into the water. It is best freshly made. Any kind of wood may be used for charcoal except fir-wood. A brush stem of alder wood is excellent. Beech, hazel, willow, oak, and elm are all good.

PORK.

Cheap Pork, Cheap Apples, Cheap Poultry.—Adjoining my barnyard I have an acre range for my hogs. This range is planted mainly with sweet apples. Sour milk from the dairy, with the apples, raise my pork. They are fattened on apples and corn. The chickens follow the hogs, and give me cheap eggs and poultry. The droppings of the hogs fertilize the orchard. So I have cheap pork, cheap apples, cheap poultry.

Cheap Pork.—Erect nice-floored, cool pens, as convenient to house as possible, so as not to endanger the health of family. Then put up one or more pigs, owing to the size of garden. Then feed grass, weeds, purslane, etc., taken from the garden, with the waste of kitchen, and plenty of water. You will be delighted to see pigs eat and grow, and with very little grain to finish off on, one will have the cheapest pork possible to grow. I had farmed scores of years before getting the idea, when one of my neighbors called my attention to his small garden, not one-eighth of an acre. Said he: "I have kept two hogs nicely this summer on the weeds and grass from that little garden or plot of land." The practice will be advantageous in destroying seeds that otherwise might be preserved to grow.

CHEESE.

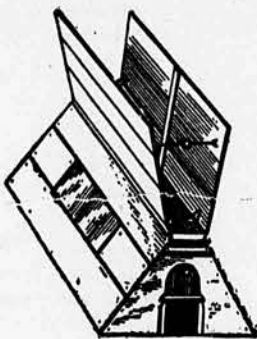
Clobber Cheese.—This is a luxury, when properly made, not found on tables as often as it should be. Place the clobber on stove, stirring often. As soon as whey rises, or when scalded enough to kill the sour taste of clobber, turn pan from side to side and drain whey off, or pour through colander. Chop the curd up and salt to taste. Serve with thick, sweet cream.

Dutch Cheese.—Scald thick milk until the curd is thoroughly cooked. Pour in clean flour sacks. Hang up to drain. When done, squeeze all the remaining whey out and run through a colander. Pack into earthen jars. Tie down to exclude air and insects, and stir once a day. Keep by the stove pipe in winter, until it smells "cheesy." In summer, it will cure on the pantry shelf

soon enough, as fire-heat then soon makes it sour. When cured properly, (which you can tell after a little experience), melt butter enough in your skillet to fry the desired quantity for a meal; when hot, pour in the cheese, stir with a steel fork until it is cooked thin like corn-starch pudding, and when it "strings" from the fork it is done. Salt to taste, pour into buttered molds or dishes, and serve, or wait until it is cold. We like it better warm on our bread and butter, and it gives one such an appetite in spring. The weather is getting warm enough now to have it cure quickly. We had our first spring meal of it this week, and how we did eat. Even baby loves it. When cold, one can slice it just like other cheese. It beats all cheese of commerce we think now, as once upon a time, we did not like it; but we can learn to like it, just as we do limburger, and it sells for more a pound than the latter strong stuff. Farmers retail it here for 40 cents per pound at restaurants. Every Dutchman loves it.

CHICKENS.

A Good Chicken Coop.—This is especially valuable for raising early chicks. One and 2 are two common window glasses, which are fastened in grooves in the boards. The opposite side of the coop is simply plastering



lath. The roof is composed of two doors which can be raised when sunlight or more air is wanted than can be had at the ends, which have a short piece of lath at the top. The small door slides up and down, and can be kept at any desired height by a nail being put through the hole in the door into the hole in the board above; if the coop is set on a board platform it will be vermin proof. This coop is cheap, durable, and can be made of any size.

Automatic Chicken Fountain.—I first procured a galvanized iron pan from tin shop, 14 inches in diameter and 2 inches deep, costing 30 cents, then a common drain tile 10 inches in diameter and 12 inches long. Now take 1 inch board, cut round, and on outer rim tack strips of some old felt boot, make to fit reasonably tight in tile. Hang with wires about 4 inches from bottom of tile to hold weight of water and pressure of air; now put your pan on wide board, place a cloth in bottom, and place tile on same. Have two bolts connecting bottom board with piece across top of tile, regulate flow of water by tightening on bolts. Pan will always be full of water, never run over, chickens can not get in. Consequently the water is pure and clean. I built a little house over mine so as to keep water cool; have made two that have been in perfect operation for two years.

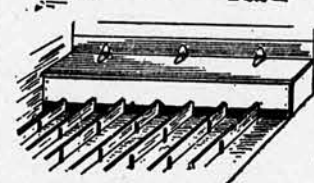
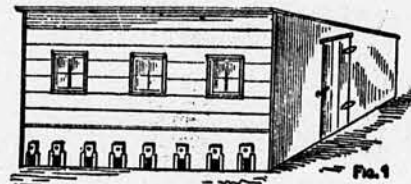
Chicken Sandwiches.—To make nice chicken sandwiches, boil the chicken until the bones can be picked out; then put through sausage mill. Ham, beef, or any other kind of meat is nice fixed the same way, either for home use or picnics.

Dressing Chickens.—Do not spend half an hour picking and scraping a young chicken when you can skin it in one minute. While warm, cut around the leg and open the skin to body, then with your fingers you can roll the skin off, feathers and all, as easily as tearing paper. Cut the wings at the second joint from the end, as there is no meat. Sometimes the wings make nice little dusters. You will enjoy the chickens better without the skin.

Keep Hogs and Chickens Apart.—It is not good policy to have hogs and chickens feed together. The chickens are liable to be trampled under the hogs' feet, killed and eaten. To avoid this, enclose your feed pens with wire netting, high enough so the chickens can not fly over it. Then cut holes in each feed pen (if hogs are not constantly kept in it) large enough for a hog to pass through. Make a frame for each hole. Now make a door for each frame, two inches smaller all around than frame. Drive two staples in top end of door, near the corner. Put a wire through staples and fasten around top of frame so as to let the

door swing. The hogs will soon learn to push the door in or out, and pass through, and the door will fly back in its place and keep Mr. Chick out.

House for Young Chickens.—This house I have found to be invaluable for broods of chickens, particularly in cold weather. On snowy February days let the mothers stay in the boxes, and through the little inner doors, turn the chicks into the house, to feed in the light, and when chilled at all they will return to the mothers. The divisions on the floor prevent the broods mixing, and they can be fed and tended according to age. It may be made of cheap lumber by a rough carpenter. Dimensions—9 by 12 feet, 7 feet high in front, 5 feet back, flat top. Can be



lengthened according to number of broods you wish to house. Boxes inside, 18 by 16 inches, 16 inches high; outside doors, 7 by 7 inches; openings inside 4 inches high and the width of the box, closed by strips of board held by a little stake. Have the top fastened by hinges—or laid on without nailing—so as to remove and spray the boxes and house frequently with carbolic wash. Ten or 12 inch boards, held by sharp stakes, divide the floor inside. Let the house face the north, board up solidly on that side. The south side and ends solid about 2 feet and then strips to the top to admit the sun. This will house at least eight broods and makes chicken raising easy the year round.

Preventing Hogs from Catching Chickens.—Take a piece of leather 5 or 6 inches wide and 6 or 8 inches long and fasten two corners of leather to tips of hogs' ears with common hogs' rings letting leather hang over face. In this way they may see to eat and drink, yet are not able to chase chickens on account of leather over face. Try this and you will be able to break the worst chicken-eaters you have.

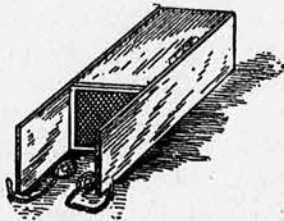
Raising Chickens.—A good plan is to set at least 5 or 6 hens the same day. When the chicks are hatched give from 15 to 20 to some of the hens and set the other hens at more profitable business. Put the hatch in a colony of from 4 to 6 coops, the central coop being about 8 feet long, 4 wide, and 4 high. It should have perches of 2-inch lath. Round berches deform the breast bones and spoil the fowls for some markets. As soon as the chicks can do without the hens, which will depend on the variety and on the season, remove all but the central hen and coop, and the chicks will all go to that and will soon perch.

Raising Early Chickens.—I hope some of my sister farmers' wives will try my method. I begin setting my hens the first of January; then when hatched I take them from the hen and put them on a table in a sunny window. My table is 4 feet long and 3 feet wide. I nail around the edges some thin plank, say 12 inches deep. In one end I have a small dry goods box turned upside down and lined with rabbit skins, with a small hole for the chickens to go in. I cover the table with oil cloth, and over that newspapers, which I change every day. I keep sand always on the table; feed principally on table scraps.

Smothered Chicken.—As most farmers have more or less old fowls to dispose of in the fall, I want to tell of an excellent way to cook an old fowl (or young one) tender, very quickly: Wash, and dress the fowl, leaving it whole as for roasting. Cut gash in joints so the legs will drop down; rub salt and pepper inside and out to season. Put giblets inside. Put a good-sized piece of butter in kettle, let melt, then rub fowl in the butter; lay on its back in kettle, add 1 cup water, cover tightly with a basin that just fits over it inside of kettle; cook from one to three hours, according to age of fowl, adding water as it boils away, so it will not burn. Cooked in this way chickens are more tender and much better than when boiled in water, and have not the hard crust as when roast-

ed. They can be stuffed as for roasting, but will require cooking a very little longer.

To Catch Chicken Thieves.—This trap I have used with great success in trapping weasels, skunks, rats, and minks in their raids after poultry. It gets them every time. Make a box by using two boards 3 feet long and 1 foot wide, and two boards 2 feet long and 1 foot wide, using the two longer boards for the sides and the two shorter ones for a top and bottom. Close the end and make a door of lath and



wire netting (inch mesh) hinged with leather hinges. A slot admits through it a small wire staple fastened in the bottom board. A nail will secure the door shut. Excavate a couple of inches of dirt in the open space for one or more steel traps. Before fixing the trap in place put a couple of live chickens in it and shut them in. I caught a weasel the first night and a skunk the next. In one case I covered the trap with light dirt or fine chaff. The entrance may be narrowed if wished by a small stake at each side.

Winter Care of Chickens.—Fall is the time of year to see that the chickens have a good place to live during winter. See that you have a warm coop, a shed to feed them in, a supply of road dust and gravel. Start in early to feed them, to get eggs when they bring a good price. Don't wait until the price comes up; it is too late then. Feed boiled oats for breakfast and dry wheat for their supper. Give plenty of clean milk and water to drink. Give a feed of cooked meat once a week with a sift of red pepper in it. If they get tired of oats, for a change give a bran mash. You will soon be paid for your extra trouble.

CHILDREN.

A Book for the Children.—Take the backs of some old book the size desired; then for the leaves cut muslin and put a hem half an inch wide all around. Make eyelets along one side of each leaf, also the backs, and lace together with bright cord. Paste in any pretty cards, pictures of flowers, animals, etc., and the "little tot" will have a book he will enjoy looking at, but can not tear.

Managing Children.—When children get into the habit of using naughty words, wash their mouths with soap, bitter aloes, or any other disagreeable stuff. You will break them of it in a very short time, and will admit that it is better than the rod.

CHIMNEYS.

How to Keep Chimneys from Burning.—In building the chimneys mix the mortar with strong brine. Have the inside of the chimney well plastered with the mortar. The reason is this: When the weather is damp, the salt in the mortar causes the inside of the chimney to sweat, thereby throwing off all particles of soot that have become attached to the inside of the chimney. It is the accumulation of soot on the inside of the chimneys catching fire which causes chimneys to burn out. I know a chimney that has been in constant use for twenty years, yet has never burned out.

To Keep Lamp Chimneys from Cracking.—Place your tumblers, chimneys, or vessels which you desire to keep from cracking, in a pot filled with cold water, add a little salt, allow the mixture to boil well over a fire and then cool slowly. Glass treated in this way is said not to crack even if exposed to very sudden changes of temperature. The slower the process, especially the cooling part of it, the more effective will be the work. This process may be extended to crockery, stoneware, porcelain, etc.

To Make Chimneys Draw.—Cut a 4-inch hole in hearth under grate, and carry the ashes through a 6-inch tile pipe into a closed ash-bin in the cellar. This can be cleaned once a week by hired man with wheelbarrow, saving the housewife many steps and also keep the cellar from freezing. Remove the lid from hole, and the draft will make your fire roar and the dust climb up the chimney.

WEEKLY WEATHER CROP BULLETIN.

Weekly weather crop bulletin of the Kansas Weather Service, for the week ending June 27, 1901, prepared by T. B. Jennings, Station Director.

GENERAL CONDITIONS.

Warm weather has prevailed this week, with good showers except in the central western counties extending thence northeastward into Cloud and Washington, thence southeastward into Riley, Pottawatomie, Jackson, and Jefferson. The rainfall was light also from Olathe to Fort Scott, and from Englewood to Anthony, extending north into Stafford County.

RESULTS.

EASTERN DIVISION.

May-wheat harvest is progressing in the northern counties and is finished in the southern, where stacking and threshing are now in progress, disclosing heads well filled with a good berry. Oats are ripening in the north and being cut in Osage, Wilson and Montgomery; they are short, but a plump grain in Crawford, filling well in Cherokee, and improving in Nemaha, where they now promise a fair crop, but over much of the division the crop will be poor. Corn has grown rapidly this week, and greatly improved, except in a few counties where the weather is still dry and even there it has improved more than during the preceding week; it is beginning to tassel in Wilson; in Jackson, owing to the protracted drought, some corn has begun to tassel while only two feet high. Flax is not a good crop, but is nearly ready to cut.

Pastures are short in many of the counties, also hay grass. The second crop of alfalfa is growing rapidly; it is nearly ready to cut in Neosho, and is being cut in Lyon. Apples promise well in Morris. Sweet potatoes are in fine condition in Pottawatomie.

Allen County.—The recent rain has revived the parched vegetation somewhat, but more is needed.

Anderson.—Wheat harvest well advanced, berry good but heads short; corn and pastures poor.

Atchison.—The rain was a great relief but more is needed; corn is doing fairly well; wheat being rapidly harvested; grass making a little growth.

wheat shocks; threshing begun; oats harvest in progress.

Morris.—A hot, growing week; corn in fine condition and growing rapidly; wheat harvest in full progress, fair crop; oats very poor; second crop of alfalfa growing rapidly; apples holding well and promise a large crop.

Nemaha.—A fine growing week; oats recovered greatly and promise a fair yield; wheat ripening in good condition, though some has fallen; corn clean, a good stand, well cultivated and growing rapidly; pastures good; hay in good condition and growing well.

Neosho.—Ground soaked; second crop of alfalfa ready to cut; corn is fine; oats and flax will be benefited.

Osage.—A good rain needed badly; oats being cut; flax nearly ready to cut; some hay being cut; corn growing but looks very dry; very little water in pastures.

Pottawatomie.—The wheat is in the shock, well secured; oats very short; corn doing well; sweet potatoes in fine condition; too dry for Irish potatoes.

Shawnee.—Wheat harvest about completed, a fine crop; corn has improved greatly since the rains.

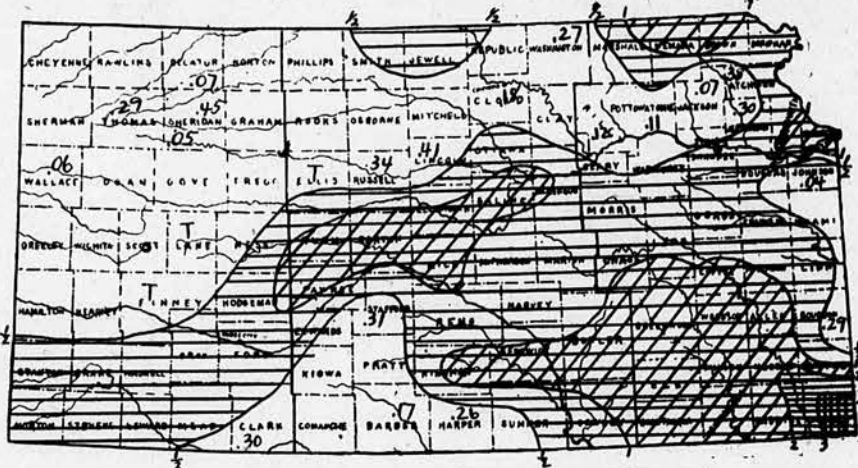
Wilson.—Wheat all in shock; oats not a very good crop; flax almost a failure, too thin on the ground; corn in fine condition but needs more rain, some fields laid by and showing tassel; the rain improved the blackberries; early potatoes commencing to dry up.

Woodson.—Good rains, ground soaked; wheat being harvested; corn good color, good condition, doing well; pastures short; hay grass fair; promises half a crop; cherries about gone; blackberries in market; gardens good.

Wyandotte.—Hot, dry week; wheat harvest about half over, quality good; pastures drying up; corn needing rain badly; oats and potatoes already badly damaged.

MIDDLE DIVISION.

Wheat harvest is progressing in most of the counties, and is beginning in the northern tier, it was delayed a few days by wet weather in the central counties; stacking is progressing in Cowley and some threshing done, disclosing a good yield and fine grade. Corn has grown rapidly this week but in Cloud and Cowley it now needs rain. The second crop of alfalfa is growing finely in Ottawa and is ready to cut in Barber; it looks well in Cloud but will need rain soon. Late cher-



SCALE IN INCHES.



ACTUAL RAINFALL FOR WEEK ENDING JUNE 22, 1901.

Bourbon.—Corn well worked and clean, but backward; oat crop will make more than one-fourth last year's yield, flax one-third; timothy and clover one-half, potatoes one-fourth.

Brown.—Soft wheat being harvested, hard wheat turning; corn has generally been cultivated second time, is clean and growing well; oats not much improved, almost a failure in southeast part; tame hay generally light crop; clover being cut.

Chautauqua.—Wheat is all harvested and threshing under way, the crop is better than expected and the quality very good; heavy wind Sunday night, blowing off many cherries and apples and breaking much corn.

Cherokee.—Crops of all kinds improving; wheat stacking in progress; wheat appears to be well filled; oats light, but filling quite well; flax probably one-half crop and is late.

Coffey.—Fine growing week; harvest delayed by rain; nights warm; corn growing rapidly; wheat nearly all cut; oats harvest next week, some oats quite fair; flax short.

Crawford.—Wheat harvest finished; ground mellow and moist; corn well worked and growing rapidly; oats very short, but a good plump grain, some of it will be mowed.

Elk.—The rain was very beneficial, but more is needed; the wind blew off many apples.

Franklin.—Rains local, east part driest. Greenwood.—Best growing week so far this season; corn growing rapidly, some laid by; second crop alfalfa making good growth; with continued rains will have average crops of grains, fodder, hay, and fruit.

Jackson.—Another hot, dry week yet corn stood it better this week than last; pastures getting very short; wheat cutting in progress, ground that gave 25 to 30 bushels last year will make 10 to 15 bushels of poor grade this year; oats ripening but poor crop; flax in bloom, it did not stool well; some early corn tasseling about two feet high; potatoes poor.

Jefferson.—Another warm, dry week; corn standing the dry weather very well; fruit falling off.

Johnson.—Hot, dry week; wheat harvest in progress; pasture getting very short.

Lyon.—Wheat harvested, average yield; second cutting of alfalfa in progress; corn growing finely these warm days.

Marshall.—Crop prospects, except oats, are fine; corn growing rapidly.

Montgomery.—Harvest closed followed by a good rainfall giving corn, gardens, and pastures the needed moisture; a violent wind blew down many fruit trees and

ries are ripening in Harvey, but apples are dropping in some orchards there. Oats are generally a short crop; they are heading in Reno and are beginning to ripen in Jewell.

Barber.—Hot, dry, windy week; corn growing finely; second crop of alfalfa ready to cut; wheat harvest in progress, yield promises well; rain badly needed.

Barton.—Wheat harvest has begun, will progress rapidly; very hot week with good showers benefiting corn, oats, barley, and grass.

Cloud.—Wheat harvest begun, will be in full progress next week, will make a little more than half a crop; corn needs rain; second crop of alfalfa looks well but must have rain soon.

Cowley.—Wheat stacking in progress, some beginning to thresh, yield about 30 bushels of fine grade wheat; corn begins to need rain; high wind on 20th blew off much fruit.

Dickinson.—Wheat harvest retarded somewhat by rain, a few fields along the river damaged by hail; grain in many fields down and tangled, most of it can be saved and will make good crop; corn growing rapidly.

Harper.—All soft wheat and about one-half of the hard wheat cut, good harvest weather, wheat is all better than expected, threshing begins next week; corn doing well.

Harvey.—Much wheat cut during the week, will be comparative little in northeast part owing to fly and chinch-bugs; corn is growing finely, some being laid by; late cherries ripening; apples dropping in some orchards.

Jewell.—Good showers but some dry spots; wheat and rye harvest begun; oats beginning to ripen, straw very short.

Kingman.—Wheat harvest progressing rapidly, quality and quantity appear to be better than expected; oats light; corn growing rapidly.

Lincoln.—A fine week for corn; a few fields of wheat cut this week; much of the wheat down; oats a poor crop.

Ottawa.—Wheat harvest progressing, the berry is fine, yield will be good; oats are a short crop; potatoes good; second crop of alfalfa growing finely; fruit promises a good yield.

Phillips.—Wheat fair crop; everything in good growing condition.

Reno.—Wheat harvest progressing, will be a good crop; oats short but heading well; corn clean, in good condition and growing rapidly; raspberries in market.

Republic.—Warm and dry; corn in good condition yet; harvest began this week,

wheat will be an average crop; oats will be short.

Rush.—Warm week with plenty of rain; harvest begun, wheat improved in last ten days and with the increased acreage will give nearly the same total as last year, quality fair.

Russell.—Wheat harvest just fairly begun; spring crops need rain.

Saline.—Severe hail from near Falun northeast to New Cambria utterly ruining crops on some farms, elsewhere everything in good condition; harvest progressing slowly on account of wet weather.

Sedgwick.—About two-thirds of the wheat is harvested and is reported good; corn good color and growing rapidly, some beginning to tassel; apples and pears promise well.

Stafford.—Wheat well filled, harvest begun; corn made good growth past week.

Washington.—Corn has grown rapidly this week; a few are cutting wheat.

WESTERN DIVISION.

Wheat harvest is progressing in Ford and has begun in Ness; wheat shows effects of drought in places in Sheridan, and only a light crop is expected in Decatur and Wallace; the early wheat is beginning to ripen in Thomas but much of it has been injured by drought and hail. The second crop of alfalfa is growing rapidly in Kearney, looks fine in Ford and well in Ness; it is not doing so well in Decatur and making slow growth in Finney. Corn has grown rapidly in Ford, Norton, Sheridan, and Thomas, and is doing well in Decatur, Ness, and Wallace. Rye harvest has begun in Ness and Sheridan, and will make an average crop in Norton. Early barley is nearly ripe in Thomas, but the grasshoppers are eating it in Wallace. Range grass looks fine in Ford, is good in Ness and Wallace, has improved in Norton, but is turning brown in places in Sheridan and is curing on the ground in Finney.

Clark.—Rain needed badly; unripened crops of barley and millet burning up.

Decatur.—Another practically dry week in the southeast part, but good rains in west and north parts; light wheat crop is all that can be expected; corn still doing well; alfalfa not so well; everything needs rain.

Finney.—Warm, dry, sultry week; vegetation is needing rain; range grass is curing on the ground; alfalfa growing slowly; cattle doing well on range.

Ford.—Wheat harvest in full progress, will be a fair yield; oats are short; fodder crops have not come up well; range grass and second crop of alfalfa look fine; corn has grown considerably in past week and looks well.

Kearney.—Somewhat dry but all crops doing well where properly cultivated; second crop alfalfa growing rapidly; fruit prospects good for all kinds, apples especially—none falling.

Lane.—South half of county needing rain, north half doing well yet; a few light local showers this week.

Morton.—A week of growing weather; some injury to corn, cane, and fruit by hail; cattle thriving.

Ness.—Warm, dry week; light local showers; wheat and rye harvest began this week; small grain filling nicely; corn looking well where clean; alfalfa a good crop though the acreage is small; forage crops looking well generally; pastures good; live stock fat.

Norton.—Local showers during early part of week have improved crop prospects and pastures; wheat and rye will now make average crops; corn is growing rapidly, weather being warm.

Sheridan.—Rye harvest begun; wheat doing better though in some places it shows effects of drought; corn clean and looking well; range grass beginning to look brown in places; good rain needed.

Thomas.—Early barley nearly ripe and very good; early wheat beginning to ripen but drought and hail have hurt it considerably; corn is clean and growing nicely.

Wallace.—Getting dry; corn doing well yet; barley short, grasshoppers eating it; wheat very light; wind blew off some fruit; range grass good.

Modern Methods of Saving Corn.

Within recent years the method of handling the corn crop has changed radically. Formerly the work of gathering and husking corn was done by hand; now it is done by machinery. The old, out-of-date method of pulling the ears by hand was not only slow and tedious, but it was wasteful—one-half the crop was allowed to literally rot in the fields. The up-to-date corn grower now cuts his corn with a corn harvester. This machine cuts and binds the corn into bundles which are discharged from the machine in bunches and in rows ready for shocking, much the same as a self-binder delivers the bundles of wheat. A corn harvester enables the corn grower to harvest fifty acres of corn in less time than is required to gather only a few acres by the old method, and the machine does the work easier, cleaner and much more satisfactory in every way. The corn husker and shredder separates the ears from the stalks and shucks them and converts the fodder into stover, which for feeding purposes is conceded to be much better than hay. Heretofore the fodder and stalks have been allowed to go to waste, notwithstanding the fact that in dollars and cents they equal one-half the value of the entire crop. That is to say, by the old method the corn grower secured only the ears and the remainder of the crop wasted in the fields. By using modern corn machinery the corn grower saves the entire crop—ears, fodder, stalks and all—and thus doubles the value of his corn crop.

It is interesting to note in this connection that the company which gave the world the first successful machine for harvesting small grain also gave the world the first successful corn binder, which was followed soon after by the first successful modern corn husker and shredder. This company is McCormick's "King Corn" is the title of a new book published by the McCormick Harvesting Machine Co., Chicago, and it explains in detail how to save the corn crop and get the full value out of this important cereal. The book is profusely illustrated with half tone engravings showing the McCormick machines at work in the fields, and it will be mailed free to any one interested in growing corn.

When writing to our advertisers please mention Kansas Farmer.

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. Reardon, McLouth.
Secretary..... Geo. Black, Olathe.

Patrons will keep in mind the dates for field work of the National Lecturer in Kansas—who will be in the several places mentioned on the following days, viz.:

Overbrook, July 17.
Lyndon, July 18.
Oak Grange, Topeka, July 19.
Cadmus, July 20.
Lone Elm, Anderson County, July 22.
Arkansas City, July 23.
Douglas County, July 24.
Miami County, July 26.
Olathe, July 27.

Professor Cottrell will also be present at all the meetings.
Will the Kansas Patron please copy?
E. W. W.

Pan-American Exposition—The Grange Building.

Buffalo, N. Y., June 8, 1901.

Editors Bulletin:—We, as chairmen of the executive committee of the National Grange, also of the New York state grange, wish to call the attention of all grangers to the work already done, regarding the facilities that are afforded for the pleasure and comfort of the grangers and their friends at the Pan-American Exposition.

We take this method of writing all subordinate granges in the United States and Canada, by sending to each a letter similar to this, and asking that it be read at each of the next three meetings of your grange, in order that every member may be entirely familiar with the plan and scope of the work, as mapped out by the committee; so far as it touches the interest of every one who proposes to visit the Exposition.

The wisdom of the action of the National Grange committee and the New York state grange committee on Pan-American affairs, is manifest to those in charge of your interests, inasmuch as thousands of grangers all over the country are signifying their intention of attending the exposition.

The Keese Information Company, with whom your committee have contracted for your comfort during your visit to the exposition, have fully justified the judgment of your committee in placing this work in their hands. Contracts have been made by them for your accommodation with all of the leading hotels and rooming houses of Buffalo, they having on their lists some forty hotels and nearly one thousand private homes and rooming houses. We find that the prevailing rates for lodging and breakfast will be, in locations near the grounds in some of the best homes in Buffalo, and in comfortable hotels, \$1.25 to the Keese Information Company's patrons, who will largely be the grangers and their friends. Also comfortable lodging in locations less desirable, but of easy access to the grounds by street car service, can be obtained at 50 cents per night and meals at 25 cents each. Provisions have also been made by this company for the establishing of two camps of tents, numbering from 100 to 200 tents in each camp, each tent accommodating four people, which will be neat, clean and comfortable quarters, and at the service of our people through the Keese Information Company at 50 cents per night for each person. These camps will be located in immediate proximity to the grounds. Your committee recommends these tents in preference to Pan-American hotels. This plan is particularly desirable where a number of members of a subordinate grange may desire to attend the exposition in a body, as ample accommodations can be secured in these camps, and meetings can easily be held in it seems desirable.

The services of our popular and well-known brother, Past Lecturer of the New York state grange, E. P. Cole, have been retained by the Keese Information Company, and he will be found ready to welcome all grangers and their friends at the company's headquarters, at No. 72 Exchange street, opposite the Union Station.

In order to provide those delicate and hospitable attentions, so much appreciated by exposition visitors, the offi-

cers of the grange have equipped and will maintain headquarters on the exposition grounds, situated in the very heart of the most interesting part of the grounds. At these headquarters has been provided a post-office, where all visiting grangers and their friends can receive and dispatch their mail. Letters sent to visitors from home should be addressed to the "Grange Building, Pan-American Exposition Grounds, Buffalo, N. Y." All visitors can check their baggage, and, best of all, be assigned direct to their lodging places. The Keese Information Company will have a representative in this building, and Sister B. B. Lord will at all times cordially greet and attend to the wants of all grangers who may call at this building.

Runners of the Keese Information Company will meet all trains, dressed in blue uniforms with yellow braid trimmings, a yellow star on the left breast of the coat, the word grange on the front of the cap. All care will be taken from the shoulders of the grangers and their friends who will place them in charge of these guides at the Union Station or other downtown depots, or will come direct to the grange building on the grounds.

Your committee feels that the arrangements herein outlined are the best that could have been made. The plan of operation of the Keese Information Company being to issue to each applicant, for the sum of \$1.00, a guide book of the city and the Falls, a map of the grounds, a map of the city and a complete hotel list, also a rooming house list, together with a rebate certificate, entitling the holder to a rebate of one dollar (\$1) from his hotel bill, provided that bill is for five dollars (\$5) or more.

Very truly yours,

E. B. NORRIS,
Chairman Nat'l Ex. Com.
IRA SHARP,
Chairman N. Y. State Ex. Com.

The Other Half.

It is an old saying that "One half the world does not know how the other half lives." We are often reminded of this when we see some of the pictures of farmers and their surroundings made for city folks to use, and read some of the "fool talk" written by dudes to please city readers of daily papers.

One such writer in an article which appeared lately, speaking of the low prices for farm products, said it was "owing to their abundance and the low grade of labor with which they were obtained." Well, that is not true now of the United States, but it may become so after we have "expanded" and taken in, besides the Sandwich Islands, and Porto Rico, Cuba and the Philippines.

"From immemorial," says this writer, "the men who actually plow and sow and reap have been classed as the dull, the least enterprising and the least elevated portion of the race. That there have been numerous and brilliant exceptions to the rule, especially in this country, is undeniably true. The farm has furnished eminent men in many lines, but the multitude out of which these peculiarly gifted geniuses have emerged, were and are considered below the rest of the community in intellectual ability. The products of mechanical labor embody more skill than those of labor devoted to agriculture and accordingly command a higher price in the market. The more intelligent part of the population of every civilized country drifts steadily away from its agricultural districts and concentrates itself in towns and cities. Not only is agricultural labor harder and more exacting of time than that required for mechanical and commercial pursuits, but its intervals are less brightened by recreation. The laborer on a farm at the busy seasons of the year begins his toil early in the day and ends it late. When the idle season comes he has to vegetate, with little or no occupation, and at all seasons his evenings and holidays have to be passed with the scanty amusements that his own restricted home affords. The dweller in a town, on the contrary, earns his wages with shorter hours of labor and spends them more agreeably, etc., etc."

To all of which we will reply that the average dweller in the country, as compared to the average dweller in the city, lives better, has better health, a longer life, more comforts, more real enjoyments, has a more varied knowledge, more skill, more books and papers, furnishes less criminals, and is in general a better citizen and a better human being.

The great work of the grange for over a quarter of a century with its

grand precepts and principles, its education, its development of a higher and better manhood and womanhood, its lessons of life and true living learned in tens of thousands of meetings held each year, and which is to-day furnishing well equipped men and women for the very highest positions in our country and in society—refutes the writings of such city writers who are ignorant of how the other half lives.

We will go forward in our work, nevertheless, until "we make the world respect the tillers of the ground."—Grange Bulletin.

Cause and Effect.

As one goes about among farmers and patrons, it is plainly to be seen that the success or failure of given principals, as a rule, is not through any fault in those principals, but in the application.

This applies to business, to farming, and to the grange. It is a matter of locality. Passing along the highways, on farms with only a fence or a road between them, can be noticed, on the one side all the signs of thrift, prosperity and happiness; while on the other are the tokens that tell of non-success, going backward, and a sheriff's sale.

One grange has a good hall, organ, plenty of members, young and old, well attended meetings, success, prosperity; while another in an adjoining township "is tired," "slow," "sleepy," and then—dormant.

The principals of good farming, and the principals of the grange are right, and properly applied bring success. We don't expect our neighbors to come over, and plant, cultivate, and gather over the crops for us on our farms; and so each grange must work its own field, and its harvest will be in proportion as it diligently applies the good principals and precepts of our order.—Grange Bulletin.

One New Grange.

Rev. J. C. Lovett, Deputy Master for Miami County, writes that he organized a new grange in Somerset, June 6, with 28 members, and that at the first meeting after installation of officers, 14 new applications were received. J. W. King was elected Master and P. P. Lay secretary. As far as reported this makes Miami the banner county for increase in membership this year.

All the great work of the world is now done by associated or organized effort, and it is a necessary part of the machinery of progress. Those who would do their part of the world's work should use the most effective machinery, and for the farmer and his family this means the grange.

Is there any need of a class organization for farmers? Something which will put the farmer upon equal footing with his competitors, enable him to do his best work, and secure fair compensation for it? In these days of universal organization by all other classes there can be but one answer. And as to the place for the best associated effort, there can also be but one answer, the grange.

The day assigned to Leavenworth for the visit of the national lecturer being school meeting day was not acceptable. The picnic will be on Monday, July 29, instead of on Thursday the 25th. Bro. Bachelder can not be there at that time, but two representatives from the college, Prof. E. B. Cowgill of the KANSAS FARMER, and the master and lecturer of the state grange will be present. The evening of the 25th will be spent with the grange at New Lancaster in Miami County, and on the 26th will be the picnic with the new grange at Somerset under the direction of all the Patrons of Husbandry in the county.

A Weak Stomach

is both effect and cause of weakened nerves. Deprived of nerve-force, the stomach cannot perform its labors, nutrition is perverted, food is converted into acid ferments that poison the nerves, cloud the intellect and weaken the entire system. There is one remedy, and one only. Build up the nerves.

"My stomach was so weak that I could not take any solid food, and I was nervous, restless, irritable and unable to sleep. After taking Dr. Miles' Nervine I gained rapidly in flesh and in six months I was well."
Mrs. E. H. PROCTOR, Tilton, N. H.

Dr. Miles' Nervine

stimulates the appetite, regulates digestion, and builds up wasted tissues.

Sold by druggists on guarantee.
Dr. Miles Medical Co., Elkhart, Ind.

THE DOLLARS AND CENTS OF IT.

The Stock Breeders' Annual, a valuable bulletin of 40 pages, has just been published by the Kansas Farmer Company, of Topeka, Kansas. The first part consists of a discussion of the values of feeding stuffs, a table of composition and money values of all common feeding stuffs, and a discussion and a table of feeding standards. With this bulletin at hand any farmer who can "do a sum" in arithmetic can determine how to make balanced rations of the feeds he grows on his farm, or, if he has not the necessary materials, the book will show him what he can afford to pay in the market for such feeds as will enable him to make balanced rations suitable for every class of animals on the place. This part of the Annual was written by E. B. Cowgill, editor of the KANSAS FARMER.

It has been made a part of the instruction of the students in feeding at the Kansas Agricultural College, and has been copied by Secretary Coburn in one of his invaluable reports.

The second part of the bulletin contains the Kansas Improved Stock Breeders' Classified directory for 1901, compiled by H. A. Heath, Secretary. An edition of 10,000 copies has been printed. As long as they last any reader of this paper can obtain a copy for a two-cent stamp to pay for postage and mailing.

When writing advertisers please mention Kansas Farmer.

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On Conorado Beach is intended for those who want to live outdoors all summer, who like to live simply and without restraint. Clean, cheap, convenient, comfortable. Furnished tents (single) \$12 a month. Excellent meals at a quarter each. Ice water piped to tents free. Electric light in each tent. Low railroad rates this summer over the Santa Fe.

Write for particulars.
T. L. KING, Agent The Atchison, Topeka & Santa Fe Ry.,
TOPEKA, KANSAS.

The Poultry Yard.

Eggs and Their Uses as Food.

FARMERS' BULLETIN NO. 128, U. S. DEPARTMENT OF AGRICULTURE.

(Continued from last week.)

CANNING.

Eggs are sometimes removed from the shells and stored in bulk, usually on a commercial scale, in cans containing about 50 pounds each. The temperature recommended is about 30° F., or a little below freezing, and it is said they will keep any desired length of time. They must be used soon after they have been removed from storage and have been thawed.

PACKING.

The substances suggested and the methods tried for excluding air conveying micro-organisms to the egg, and for killing those already present, are very numerous. An old domestic method is to pack the eggs in oats or bran. Another, which has always had many advocates, consists in covering the eggs with limewater which may or may not contain salt. The results obtained by such methods are not by any means uniform. Sometimes the eggs remain fresh and of good flavor, and at other times they spoil. Recently, in Germany, twenty methods of preserving eggs were tested. The eggs were kept for eight months with the following results: Those preserved in salt water, i. e., brine, were all bad, not rotten, but unpalatable, the salt having penetrated the eggs. Of the eggs preserved by wrapping in paper, 80 per cent were bad; the same proportion of those preserved in a solution of salicylic acid and glycerine were unfit for use. Seventy per cent of the eggs rubbed with salt were bad, and the same proportion of those preserved by packing in bran, or covered with paraffin or varnished with a solution of glycerine and salicylic acid. Of the eggs sterilized by placing in boiling water for 12 to 15 seconds, fifty per cent were bad. One half of those treated with a solution of alum or put in a solution of salicylic acid were also bad. Forty per cent of the eggs varnished with water glass, collodion, or shellac were spoiled. Twenty per cent of the eggs packed in peat dust were unfit for use, the same percentage of those preserved in wood ashes, or treated with a solution of boric acid and water glass, or with a solution of permanganate of potash were also bad. Some of the eggs were varnished with vaseline; these were all good, as were those preserved in limewater or in a solution of water-glass. Of the last three methods preservation in a solution of water-glass is especially recommended, since varnishing the eggs with vaseline is time consuming, and treatment with limewater sometimes communicates to the eggs a disagreeable odor and taste.

Many of these methods have been tested at the agricultural experiment stations in this and other countries. The Canada station found that infertile eggs kept much better than fertile eggs when packed in bran. In view of the fact that preservation in brine has been said to injure the eggs by giving them an unpleasant, salty taste, experiments were recently made a Berlin University to learn the proportion of salt which entered the eggs when placed in brine of varying strength. It was found by the investigator that with a saturated or half-saturated solution, the salt entered the eggs at first very quickly, and later much more slowly. After remaining four days in the saturated solution, an egg contained as much salt as one which remained four to six weeks in a 1 to 3 per cent solution. If kept in the saturated solution four weeks, 1.1 per cent salt was found in the yolk and 1.5 per cent in the white of the eggs. None of the eggs tested were spoiled. When a 1 to 5 per cent solution was used, the eggs kept well for four weeks and did not have a salty flavor. These instances are sufficient to show that any given method will give different results in different hands, and this is not surprising, since the eggs used are not always uniformly fresh, nor is it at all certain that other experimental conditions are uniform.

WATER-GLASS.

In the last two or three years the method of preserving eggs with a solution of water-glass has been often tested both in a practical way and in laboratories. The North Dakota Experiment Station has been especially interested in the problem. In these experiments a 10 per cent solution of water-glass preserved eggs so effectually that "at the end of three and one-half months eggs that were preserved the first part of August still appeared to be perfectly fresh. In most packed

eggs, after a little time, the yolk settles to one side, and the egg is then inferior in quality. In eggs preserved for three and one-half months in water-glass, the yolk retained its normal position in the egg, and in taste they were not to be distinguished from fresh store eggs. Again, most packed eggs will not beat up well for cake making or frosting, while eggs from a water-glass solution seemed quite equal to the average fresh eggs of the market."

Water-glass or soluble glass is the popular name for potassium silicate or for sodium silicate, the commercial article often being a mixture of the two. The commercial water-glass is used for preserving eggs, as it is much cheaper than the chemically pure article which is required for many scientific purposes. Water-glass is commonly sold in two forms, a sirup-thick liquid, about the consistency of molasses, and a powder. The thick sirup, the form perhaps most usually seen, is sometimes sold wholesale as low as 1 1/4 cents per pound in carboy lots. The retail price varies, though 10 cents per pound, according to the North Dakota Experiment Station, seems to be the price commonly asked. According to the results obtained at this station a solution of the desired strength for preserving eggs may be made by dissolving 1 part of the sirup-thick water-glass in 10 parts, by measure, of water. If the water-glass powder is used less is required for a given quantity of water. Much of the water-glass offered for sale is very alkaline. Such material should not be used, as the eggs preserved in it will not keep well. Only pure water should be used in making the solution, and it is best to boil it and cool it before mixing with the water-glass. The solution should be carefully poured over the eggs packed in a suitable vessel, which must be clean and sweet, and if wooden kegs or barrels are used they should be thoroughly scalded before packing the eggs in them. The packed eggs should be stored in a cool place. If they are placed where it is too warm silicate deposits on the shell and the eggs do not keep well. The North Dakota Experiment Station found it best not to wash the eggs before packing, as this removes the natural mucilaginous coating on the outside of the shell. The station states that 1 gallon of the solution is sufficient for 50 dozen eggs if they are properly packed.

It is, perhaps, too much to expect that eggs packed in any way will be just as satisfactory for table use as the fresh article. The opinion seems to be, however, that those preserved with water-glass are superior to most of those preserved otherwise. The shells of eggs preserved in water-glass are apt to crack in boiling. It is stated that this may be prevented by puncturing the blunt end of the egg with a pin before putting it into the water.

IN THE EAST INDIES.

In the East Indian Archipelago salted ducks' eggs are an article of diet. The new-laid eggs are packed for two or three weeks in a mixture of clay, brick-dust, and salt. They are eaten hard-boiled. It is said that in this region and in India turtle eggs are also preserved in salt. These products, while unusual, do not necessarily suggest an unpleasant article of diet. The same can hardly be said of a Chinese product which has often been described. Ducks' eggs are buried in the ground for ten or twelve months and undergo a peculiar fermentation. The hydrogen sulphid formed breaks the shell and escapes while the egg becomes hard in texture. It is said that the final product does not possess a disagreeable odor or taste. Eggs treated in this or some similar way are on sale in the Chinese quarter of San Francisco, and very likely in other American cities. A sample recently examined had the appearance of an egg covered with dark-colored clay or mud.

SELLING EGGS BY WEIGHT.

Since eggs vary more or less in size it has been proposed that they should be sold by weight rather than by the dozen, which is the usual custom in this country. The North Carolina Experiment Station, in investigating this point, recorded the weight of eggs per dozen and the number produced during six months by pullets and old hens of a number of well-known breeds and by ducks. Generally speaking, larger eggs were laid by hens than by pullets of the same breed. The eggs laid by Pekin ducks (old and young) averaged 35.6 ounces per dozen, and were heavier than those laid by any breed of hens. Of the different breeds of hens tested the largest eggs weighed 28 ounces per dozen, and were laid by Light Brahmas. The Black Langshan and Barred Plymouth Rock hens' eggs weighed a little

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over 26 ounces per dozen, while those laid by Single Comb Brown Leghorns, late hatched Plymouth Rock, White Wyandotte, and Buff Cochins hens ranged from 21.7 to 23.7 ounces per dozen.

Of the pullets, the heaviest eggs (weighing 26.5 ounces per dozen) were laid by the Black Minorcas, the lightest by the Single Comb Brown Leghorns and Silver Laced Wyandottes. These weighed 17.5 and 22.1 ounces per dozen, respectively. The Barred Plymouth Rock, White Plymouth Rock, White Wyandotte, Black Langshans, and Buff Cochins pullets' eggs all weighed not far from 24 ounces per dozen. As will be seen, the variation in the weight of the eggs was considerable. In tests carried on at the Maine Experiment Station it was noticed that eggs from hens that laid the greatest number were on an average smaller in size than those from hens producing fewer eggs. The percentage of fertility was also less in the former than in the latter.

In the North Carolina test all of the eggs, regardless of size, had a local market value of 13 1/2 cents per dozen at the time of the investigation. If a dozen Single Comb Brown Leghorn pullets' eggs weighing 17 1/2 ounces were worth 13 1/2 cents per dozen, or 12 cents per pound, the eggs of the other breeds would be actually worth from 16.3 cents for the Single Comb Brown Leghorn hens to 21.6 cents per dozen for the Light Brahma hens, or from 20.7 to 60 per cent in excess of their market value. The eggs of the Pekin ducks would be worth 26.7 cents, or 97.8 per cent above their market value. On the basis of the results obtained, the station advocates selling eggs by the pound instead of by the dozen. It is said that the egg packers and dealers maintain that this method would increase the cost of the eggs, owing to the extra handling necessary and the consequent breakage. An apparent objection to selling eggs by weight is that they are not generally used in the household in this way. Most recipes call for eggs by number and not by weight. There is no question that weighing the eggs would be more accurate, and recipes are occasionally met with in which this method is followed.

DESICCATED EGGS, EGG POWDERS, AND EGG SUBSTITUTES.

Different methods of evaporating or desiccating eggs have been proposed and several products which claim to be prepared in this way are now on the market. It is said that the egg is dried in or out of a vacuum, usually by a gentle heat or by currents of air. When placed on the market the dried egg is usually ground. Sometimes salt, sugar, or both have been used as preservatives. As will be seen by reference to the table of composition such material is merely egg from which the bulk of the water has been removed. If the process of manufacture is such that the resulting product is palatable and keeps well, the value of evaporated eggs under many circumstances is evident.

This material is used by bakers to some extent as being cheaper when fresh eggs are high in price. It is also used in provisioning camps and expeditions, since desiccated foods have the advantage of a higher nutritive value in proportion to their bulk than the same materials when fresh. Fresh eggs contain about 25 per cent of dry matter. If all the water is removed in preparing evaporated eggs, 1 pound will furnish nutritive material equivalent to about 4 pounds of fresh eggs. One of the commercial egg products recently tested appeared to be dried egg coarsely ground. For use it was thoroughly mixed with a small quantity of water. The mixture could then be fried or

made into an omelet, etc., and was found to be very palatable, closely resembling in taste the same dishes made from fresh eggs.

An egg substitute has been manufactured from skim-milk. It is said to contain the casein and albumen of the milk mixed with a little flour, and is put up in the form of a paste or powder. Such material is evidently rich in protein, and, according to reports apparently reliable, is used in considerable quantities by bakers and confectioners in place of fresh eggs.

Egg substitutes have been devised which consist of mixtures of animal or vegetable fats, albumen, starch or flour, coloring matter, and some leavening powder in addition to the mineral matters similar to those found in the egg. Such products are designed to resemble eggs in composition.

Other egg substitutes have been marketed which contain little or no albumen, but apparently consist quite largely of starch, colored more or less with yellow substance. These goods are specially recommended for making custards and puddings similar in appearance to those in which fresh eggs are used. There is no reason to suppose that such products can not be made so that they will be perfectly wholesome. The fact must not be overlooked that in the diet they can not replace fresh eggs, since they do not contain much nitrogenous matter or fat. As recently pointed out in one of the medical journals, this may be an important matter if such an egg substitute is used in the diet of invalids, especially if the composition of the egg substitute is not known, and it is employed with the belief that, like eggs, it contains an abundance of protein.

(To be continued.)

POULTRY BREEDERS' DIRECTORY.

FOL SALE—Choice Single Comb White Leghorn hens, one year old. \$4 dozen. Ella F. Ney, Bonner Springs, Kans.

HIGH-SCORING, PRIZE-WINNING, Cornish Indian Games, W. P. Rocks, Black Langshans. Eggs \$1 per 18. Mrs. J. C. Strong, Moran, 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. Pockham, 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.
GEO. H. STAHL, Quincy, Ill.

EGGS .. For .. Hatching.

From Pure-Bred, High-Scoring, Prize-Winning,
WHITE AND PLYMOUTH ROCKS
BARRED...
13 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.

T. E. LEFTWICH, Larned, Kansas.

EGGS AND STOCK.

Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Buff Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, S. C. Brown Leghorns and Belgian Hares.

First Class Stock of
Standard Birds of Rare Quality.

Fine Exhibition and Breeding Stock. Write me your wants. Circulars free.

A. H. DUFF, Larned, Kans.

MARKET REPORTS.

Kansas City, June 24.—Cattle—Receipts, 4,891. The market was slow and weak in the native division. Representative sales:

SHIPPING AND DRESSED BEEF STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 20, 24, 18, 19, 33, 41.

WESTERN STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 33, 41.

OKLAHOMA STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 104, 157.

SOUTHWEST STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 104.

IOWA STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 14.

COLORADO STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 37.

TEXAS AND INDIAN STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 48, 46, 48, 31.

TEXAS AND INDIAN COWS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 13, 21, 13.

IOWA COWS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 5, 21.

NATIVE HEIFERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 24, 24, 6.

NATIVE COWS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 5, 2, 39, 6.

NATIVE FEEDERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 16.

NATIVE STOCKERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 22, 3, 2, 2.

STOCK COWS AND HEIFERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Rows include 45, 1, 1 spg.

Hogs—Receipts, 4,368. The market was about steady. Representative sales:

Table with 4 columns: No., Ave. Price, No., Ave. Price, No., Ave. Price, No., Ave. Price. Rows include 68, 63, 89, 100, 107, 110.

Sheep—Receipts, 443. The market was strong to 10 cents higher. Representative sales:

Table with 4 columns: No., Ave. Price, No., Ave. Price, No., Ave. Price, No., Ave. Price. Rows include 28, 4, 80, 10.

Chicago Live Stock.

Chicago, June 24.—Cattle—Receipts, 22,500. Good to prime steers, \$5.45@6.25; stockers and feeders, \$2.90@4.85; Texas steers, \$4.25@5.40.

Hogs—Receipts, 37,000. Mixed and butchers, \$5.85@6.20; bulk of sales, \$5.95@6.10.

Sheep—Receipts, 2,000. Good to choice wethers, \$4.00@4.30; western sheep, \$4.00@4.30; native lambs, \$4.00@5.25.

St. Louis Live Stock.

St. Louis, June 24.—Cattle—Receipts, 2,500. Native steers, \$3.75@6.10; stockers and feeders, \$2.80@4.60; Texas and Indian steers, \$3.45@5.15.

Hogs—Receipts, 3,500. Pigs and lights, \$5.90@6.00; butchers, \$6.10@6.17½.

Sheep—Receipts, 1,800. Native muttons, \$3.65@4.00; lambs, \$4.50@5.65.

Omaha Live Stock.

Omaha, June 24.—Cattle—Receipts, 1,500. Native beef steers, \$4.50@5.80; western steers, \$4.00@4.80; Texas steers, \$3.50@4.50; stockers and feeders, \$3.25@4.75.

Hogs—Receipts, 2,500. Heavy, \$5.92½@6.00; bulk of sales, \$5.92½@5.95.

Sheep—Receipts, 1,700. Fed muttons, \$3.80@4.10; common and stock sheep, \$3.00@3.65.

Kansas City Grain.

Kansas City, June 24.—Wheat—Sales by sample on track:

Hard—No. 2, 63½c; No. 3, 62½@63c. Soft—No. 2, 64c; No. 3, 62@63c.

Mixed Corn—No. 2, 42c; No. 3, 41½c. White Corn—No. 2, 42c; No. 3, 41½c.

Mixed Oats—No. 2, 29½c; No. 3, 28½c. White Oats—No. 2, 30½c; No. 3, 29@29½c.

Rye—No. 2, nominally 49c. Prairie Hay—\$4.00@10.50; timothy, \$5.00@12.00; alfalfa, \$4.00@8.00; clover, \$6.00@9.00; straw, \$3.00@3.50.

Chicago Cash Grain.

Chicago, June 24.—Wheat—No. 2 red, 67½c; No. 3, 66½c; No. 2 hard winter, 66½c; No. 3, 65½@66½c; No. 1 northern spring, 67½@68½c; No. 2, 67c; No. 3, 64@67c.

Corn—No. 2, 43c; No. 3, 43½c. Oats—No. 2, 28@28½c; No. 3, 28@30c.

Futures: Wheat—June, 66c; July, 66½@66¾c; September, 66½@66¾c. Corn—June, 42¾c; July, 43¾c; September, 44¾c. Oats—June, 72c; July, 27½@27¾c; September, 26¾c.

St. Louis Cash Grain.

St. Louis, June 24.—Wheat—No. 2 red cash, elevator, 65½c; track, 65@66c; No. 2 hard, 66@66½c. Corn—No. 2 cash, 42c; track, 43½@43¾c. Oats—No. 2 cash, 28¾c; track, 28¾@29½c; No. 2 white, 31c.

Kansas City Produce.

Kansas City, June 24.—Eggs—Fresh, 30 doz.

Poultry—Hens, live, 6¼c; roosters, 15c each; broilers, 13@16c lb; ducks, spring, 9c; turkey hens, 6c; young toms, 4c; old toms, 4c; pigeons, \$1.00 doz. Choice scalded dressed poultry 1c above these prices.

Potatoes—New, 75@85c bushel, sacked; home grown, 65@75c per bu; northern, 70c bushel.

Fruit—Strawberries, \$2.00@3.00 per crate; blackberries, \$1.00@1.25 crate; gooseberries, \$1.00 per crate; cherries, \$1.50@1.75 per crate; raspberries, black, \$1.25@1.50 per crate. New apples, 60@75c per 4-basket crate; currants, per crate, \$1.50@1.75.

Vegetables—Tomatoes, Texas, \$1.00@1.15 per four-basket crate; navy beans, \$2.25@2.30 bushel. Cabbage, \$2.00@2.75 per cwt. Onions, new, 90c@1.00 bu; cucumbers, \$1.00@1.50 per bushel crate.

Melons—Texas cantaloupes, per bushel crate, \$1.50@2.00; watermelons, per dozen, \$2.50@4.00.

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MISCELLANEOUS. WANTED—A good housekeeper for family of four, and two or three hands. Strictly moral character required; references exchanged; \$4 per week. Address Box 106, Las Animas, Colo. FOR SALE CHEAP—Cocker Spaniel Pups. W. H. Richards, V. S., Emporia, Kans. WANTED—Man and wife to work on stock farm, that have had experience in farming and taking care of stock. Wife to cook for 3 to 5 men and take care of house. Call on or address S. M. Knox, La Harpe, Kans. FARM HAND WANTED—On dairy farm. Write with reference. Box 166, Clifton, Kans. FOR SALE—Six pure bred Lowelling and Irish Setter pups; also a fine Lowelling bitch, 2 years old, well broke on quail. Thomas Brown, Route No. 1, Clifton, Kans. SCOTCH COLLIE PUPPIES—Of pure breeding. Will be sold cheap if ordered at once. Write now to O. A. Rhoads, Columbus, Kans. WOOL WANTED—We want, and will pay the highest market price in cash for 500,000 pounds of wool. When you write for prices send us a sample of your wool by mail to Oakland, Kans. Be sure and get our prices before you sell. Topeka Woolen Mill Co. 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.

The Stray List. For Week Ending June 13. Cherokee County—S. W. Swinney, Clerk. MARE—Taken up by John Paxon, in Spring Valley Tp., May 27, 1901, one black mare, 9 years old, 14½ hands high, blind in left eye, one light bay mare, 3 years old, 13½ hands, one sorrel mare, 3 years old, 14 hands high, blaze face. For Week Ending June 20. Rush County—W. P. Hays, Clerk. MARE—Strayed away from A. T. Sizer, whose residence is section 26, township 19, range 20, Rush county, June 10, 1901, one light bay mare, 3 years old; white spot on forehead, white hind left foot, weight 700 or 800 pounds. Cherokee County—S. W. Swinney, Clerk. MARES—Taken up by James Vick, in Lowell Tp., June 3, 1901, one brown mare, 15 hands high, shod all around, 12 years old, no brands, but has been worked; valued at \$90; also, one chestnut sorrel mare, 1 white hind foot, star in forehead, shod in front, aprain knot on left hind leg, has been worked; valued at \$40. MARE—Taken up by F. A. J. Shaffer, in Garden Tp., June 8, one blue-grey mare, 4 feet 2 inches high, 2 years old; valued at \$14. Rawlins County—A. V. Hill, Clerk. HORSE—Taken up by M. Beam, in Union Tp. (P. O. Atwood), May 13, 1901, one bay horse, marked CE; valued at \$15. Rawlins County—A. V. Hill, Clerk. MARE—Taken up by Oliver Wilcox, in Logan Tp. (P. O. Atwood), May 28, 1901, one iron gray mare; valued at \$15. Wilson County—C. W. Ishman, Clerk. CALF—Taken up by M. L. Somers, in Cedar Tp. (P. O. Altoona), May 6, 1901, one steer calf, red and white spotted; valued at \$14.

For Week Ending June 27. Cherokee County—S. W. Swinney, Clerk. MARE—Taken up by C. McDonald, in Garden tp., June 17, 1901, one light bay mare, 10 years old, weight 900 pounds, dim star in forehead, left front foot and left hind foot white; valued at \$30. Thomas County—Henry M. Thiel, Clerk. COW—Taken up by Frank Bedford, in Kingery tp., May 3, 1901, one light red cow, round hole through left ear, and split from there to the end, weight 800 pounds; valued at \$25. Greenwood County—C. D. Pritchard, Clerk. MARE—Taken up by W. H. Combs, in Pleasant Grove tp. (P. O. Neal), June 12, 1901, one dark sorrel mare, 10 or 11 years old, large white spot on forehead, throughpin in left gambel joint, branded, supposed to be inverted G on left shoulder.

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MISCELLANEOUS. High Grade Agent Wanted. An established and responsible manufacturing concern, of Omaha, wants an A 1 man to take the agency for its product in several counties in this state. He must be of high integrity and standing, a good business man and a salesman. He must give the business all his time, be a hustler, and willing to work hard to build up a good business. Men who are idle, who change about or who are not in earnest with a record for success behind them, cannot fill the position. It will be permanent and it will take time and money to break a man into it, therefore, it must be filled right. It will pay \$1500, or more, per year. Give age, past experience, present business, three business references, and address, Box 25, Omaha, Neb. BINDER TWINE FARMERS wanted as agents. Stimson & Co., Kansas City, Mo. Registered Stock, DUROC-JERSEYS, contains breeders of the leading strains. N. B. SAWYER, - - Cherryvale, Kansas. E. S. COWEE, Eskridge, Kans., R. R. 2, Breeder of PURE-BRED HEREFORD CATTLE Kids' DUKE 96637 at head of herd. Young bulls and heifers for sale.

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2 " " " 8c per ft.	" " " 9c per ft.
2 1/2 " " " 9c per ft.	" " " 10c per ft.
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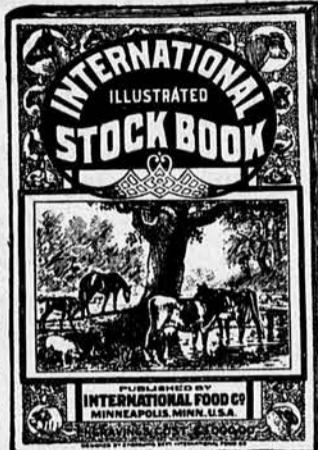
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