

KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, DECEMBER 5, 1901.

ESTABLISHED IN 1863
\$1.00 A YEAR

Breeders' Directory.

DUROC-JERSEY SWINE.

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

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

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, Kans.
Farm 2 miles west of city on Maple Avenue.

FAIRVIEW HERD DUROC-JERSEYS.
Have sold all spring males, but have about 60 fine pigs of September and October farrow at reasonable prices.
J. B. DAVIS, FAIRVIEW, BROWN CO., KANS.

DUROC-JERSEY SWINE—REGISTERED
Write for prices on what you want; 100 to select from.....
NEWTON BROTHERS, Whiting, Kans.

STANDARD HERD OF Registered Duroc-Jerseys

PETER BLOCHER, Richland, Shawnee Co., Kans.
Herd headed by Big Joe 7363, and others. S. C. B. Leghorns.

100 Duroc-Jersey Pigs.

For Sale—100 March and April pigs from the Rock Dale Herd of Registered Duroc-Jersey Swine. The get of 8 herd boars. Prices right. Address
J. F. CHANDLER, Frankfort, Kansas.

POLAND-CHINA SWINE.

V. B. HOWEY, Box 103, Topeka, Kansas.
Breeder and shipper of Poland-China hogs, Jersey cattle, S. L. Wyandotte chickens. Eggs in season.

POLAND-CHINAS, 90 good spring pigs; 90 good fall gilts, only a few fall gilts bred but they are CHOICE. Write for one. Don't delay.
DIETRICH & SPAULDING, Richmond, Kansas.

RIVERSIDE HERD OF POLAND-CHINA HOGS.

90 head spring farrow, both sexes, fancy bred, prices reasonable. Also Commodore Dewey 46187, the prize-winner of southern Kans. Write for prices on this noted show hog. **M. O'Brien**, (Riverside), Liberty, Kas

W. P. WIMMER & SON, Mound Valley, Kans.,
...Breeders of...

FASHIONABLE POLAND-CHINA HOGS

Young stock for sale at all times. Prices reasonable.

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

Two hundred head. All ages. Twenty-five boars and 45 sows ready for buyers.

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

VERDIGRIS VALLEY HERD OF POLAND-CHINAS.

For Sale: 12 head of the best early boars that I ever produced; large, heavy-boned, and smooth. Ten head of May, June, and July boars that are fancy; also one last fall's boar that is a show pig.
E. E. WAIT, Altoona, Kansas.
Successor to **WAIT & EAST.**

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 1879. Prices right. Inspection and correspondence invited.

POLAND-CHINA 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. F. MAGUIRE**, HAYEN, HENNO COUNTY, KANSAS.

..FANCY.. POLAND-CHINAS

FOR SALE: 125 fall and spring boars and gilts, sired by Dandy U. S. 17446, and Model Boy Jr. #400. The sire of each of my herd boars cost \$1,000. Choice pigs offered at reasonable prices. Write at once to
M. ROLAND HUGHES, Independence, Mo.

THOROUGHbred POLAND-CHINA HOGS.

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

SHADY LANE STOCK FARM.

HARRY E. LUNT, Proprietor, Burden, Cowley Co., Kans.
Registered Poland-Chinas

25 Boars and 25 Gilts of late winter farrow, sired by Searchlight 25518, and Look No Further. Dams of the Black U. S., Wilkes, Corwin, and Tecumseh strains. Prices low to early buyers.

Remember the three days' Combination Sale at Wichita, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Shorthorns by J. F. Stodder, and February 13, 1902, Draft horses by J. C. Robison and Snyder Bros.

R. S. COOK, Wichita, Kansas,
BREEDER OF

POLAND-CHINA SWINE

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

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Ridgeview Farm Herd of LARGE ENGLISH BERKSHIRES

Have for sale—spring pigs of quality, at reasonable figures. Write us before buying.
MANWARING BROS., Lawrence, Kans

BERKSHIRES A Specialty

GEO. S. PRINE, Oskaloosa, Iowa.

For sale, 180 head of the best blood known, including Prine's famous Noras and other popular strains. Foundation stock supplied to breeders.

CHESTER-WHITE SWINE.

D. L. BUTTON, North Topeka, Kas
BREEDER OF
IMPROVED CHESTER WHITES
Stock For Sale.
Farm is two miles northwest of Reform School.

TWENTIETH CENTURY HERD OF UP-TO-DATE, PRIZE-WINNING CHESTER WHITES

We have 70 pigs, mostly sired by Balance All 11327, the champion boar of 1900 at leading State Fairs and the International Live Stock Exposition. Address **DORSEY BROS.**, Perry, Ill.

CATTLE.

ENGLISH RED POLLED CATTLE—Pure-bred Young Stock For Sale. Your orders solicited. Address **L. K. HASELTINE**, DOCKHATER, 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 County, Kansas.

POLLED DURHAMS. Single and double standard. Male stock for sale. I have the largest and best herd of this breed of cattle in the State. Correspondence and inspection invited. **J. Q. HOWES**,
1221 West Douglas Avenue, WICHITA, KANS.

Registered Herefords

Of either sex, at private sale. I also have 140 $\frac{1}{2}$ to $\frac{3}{4}$ high-grades at private sale.
ALBERT DILLON, Hope, Kansas

Alfalfa Meadow Stock Farm,
Shady Bend, Kansas.

Herefords, Poland-Chinas, Light Brahmas. Stock of all kinds for sale. Special: 48 Poland-China pigs. 200 bushels of pure, fresh Alfalfa Seed.
O. B. WHITAKER, Proprietor.

MAPLE LEAF HERD OF THOROUGHbred

Shorthorn Cattle, and Poland-China Swine.

Farm is 2 miles south **JAMES A. WATKINS**,
of Rock Island depot. Whiting, Kans.

BREED THE HORNS OFF BY USING A RED POLLED BULL.

CHAS. FOSTER & SON, Foster, Butler Co., Kans.
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,
Harford, Lyon County, Kansas.

Special Offerings: **FOR SALE**—One imported 4-year-old bull, 10 yearling bulls, 9 bull calves, 12 yearling heifers, and 12 heifer calves.

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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.

....125....

RAVENSWOOD SHORTHORNS

O. 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.

EAST LYNN HEREFORDS AND BERKSHIRES.

Herefords headed by Java of East Lynn 100229. Java is half brother to Dolly 5th, champion Hereford cow of America.

Berkshires headed by Premier 4th 55577. A few choice gilts and boars for sale. All breeding stock recorded. Inspection invited six days in the week.
WILL H. RHODES, Tampa, Harlan Co., Kans.

..SUNFLOWER HERD..

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

Herd Bulls, Sir Knight 124403, and The Baron 121327.

Herd Bears, Black U. S. 2d 25582 S, and Missouri's Best On Earth 19236 S.
REPRESENTATIVE STOCK FOR SALE.

Address **ANDREW FRINGLE**,
Wabaunsee County. ESKRIDGE, KANSAS.

CATTLE.

OHIO GALLOWAY CATTLE.

I have registered Galloway bulls for sale.
O. E. MATSON, Furley, Sedgwick Co. Kans

D. P. NORTON'S Breeder of Pure Bred SHORTHORNS
Dunlap, Morris Co., Kans. SHORTHORN CATTLE
Herd Bull, Imported British Lion 133692
Young stock for sale.

E. S. COWEE, Burlingame, Kans., R. R. 2, Breeder of PURE-BRED HEREFORD CATTLE, and DUROC-JERSEY SWINE.
Kids' DUKS 96687 at head of herd. Young bulls and heifers for sale.

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

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

O. F. NELSON, Hiawatha, Kansas,
Breeder of REGISTERED Hereford Cattle.
Herd headed by Dandy Dolan 102828 full brother to famous Dandy Rex.

Rock Hill Shorthorns and ..Saddle Horses..

Bulls in service, Sempstress Valentine 157069, and Mayor 129229. A fine string of young bulls and a few heifers for sale.

J. F. TRUE & SON, Proprietors.
Post-office, PERRY, KANS. Railroad station, Newman, Kans., on Union Pacific R. R., 12 miles east of Topeka.

Hillside Stock and Poultry Farm

EXTRA FINE, LARGE, PURE-BRED
M. B. Turkeys, Embden and Toulouse
Geese, Pekin Ducks, White Guineas, and 6 kinds of fancy chickens for sale.
Also Yorkshire Pigs, Cotswold Sheep, and Angora Goats
Send stamp for circular. **A. A. RIEFF**,
Box C-289. Mankato, Minnesota.

...ALLENDALE HERD OF...

Aberdeen-Angus Cattle

The Oldest and Largest in the United States
Splendid recently imported bulls at head of herd Registered animals on hand for sale at reasonable prices at all times. Inspection herd at Allendale, near Iola and La Harpe; address Thos. J. Anderson, Manager, Iola, Allen Co., Kans., R. R. 2, or—
ANDERSON & FINDLAY, Prop's, Lake Forest, Ill.

GLOVER 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 **BLACKSHEE BROTHERS**, Elm Dale, Chase County, Kansas.

THE GEO. H. ADAMS HEREFORDS

AT LINWOOD, KANS.

YEARLING Bulls and Heifers for sale, sired by Orpheus 71106, and Ashton Boy 53068, and out of choice imported, and home-bred cows. Address all correspondence to **GEORGE F. MORGAN**, General Manager, Linwood, Kansas.

E. H. WHITE, Estherville, Iowa, IMPORTER AND BREEDER OF GALLOWAY CATTLE.

Herd Foundation Stock A Specialty.
A few choice Females and 14 Bulls for sale. Inspection or Correspondence invited.

CATTLE.

Pure-bred Galloways

Young Breeding Stock for Sale
Several Bulls Ready for Immediate Service.
Large herd. Can supply demand now. Also pure-bred Cotswold Sheep. Write for prices.
W. G. McCANDLESS & SON, Cottonwood Falls, Kans

Aberdeen-Angus

THE RUTGER FARM HERD
OFFERS
Thirty registered bulls, 8 to 90 months old, low down, blocky fellows of choicest breeding and individuality. Also a few heifers bred to Expand.
CHAS. E. SUTTON, RUSSELL, KANS.

Silver Creek Shorthorns.

The Scotch bull, Gwendoline's Prince 190913, in service. Also the imported Scotch Missile bull, Ayinbury Duke. 100 head of the best Scotch, Bates, and American families. High class Duro-Jersey swine for sale.
J. F. STODDER, Burden, Cowley Co., Kans.
Remember the three days' Combination Sale at Wichita, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Short horns by J. F. Stodder, and February 13, 1902, Draft horses by J. C. Robison and Snyder Bros.

H. R. LITTLE, HOPE, DICKINSON CO., KANS., Breeds Only the Best, Pure-Bred

SHORTHORN CATTLE.

Herd numbers 135, headed by ROYAL CROWN, 125698, a pure Cruickshank, assisted by Sharon Lavender 143002.
FOR SALE JUST NOW—16 BULLS of serviceable age, and 12 Bull Calves. Farm is 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.

OLOVER BLOSSOM SHORTHORNS

Herd Headed by the Cruickshank Bulls
Imp. Nonpareil Victor 132573
Sire of the champion calf and Junior champion bull of 1900
...Grand Victor 115752...
Himself a show bull and sire of prize-winners.
FEMALES are Scotch, both imported and home-bred, pure Bates, and balance 3 to 6 Scotch tops.
STOCK FOR SALE.
GEO. BOTHWELL, Nettleton, Caldwell Co., Mo.
On Burlington Railroad.



GLENDALE SHORTHORNS, OTTAWA, KANSAS.
Leading Scotch, and Scotch-topped American families compose the herd, headed by the Cruickshank bull Scotland's Charm 127864, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Twenty bulls for sale.
C. F. WOLFE & SON, Proprietors.

PALO DURO STOCK FARM

Imported and American Bred SCOTCH SHORTHORN CATTLE, AND ...REGISTERED PERCHERON HORSES.

The Property of HANNA & CO., Howard, Kansas.

Bulls in Service: IMP. COLLYNIE 135022, IMP. MARINER 135024, AND IMP. LORD COWSLIP.

HERD is rich in the best Cruickshank blood and contains 10 females imported direct from Collynie and Uppermill. For Sale—10 bulls—herd heads—of choicest Scotch and Cruickshank breeding. No females for sale at present.

Registered Percherons (Brilliant) in Service. DIRECT 18889 (by Bendago by Brilliant, dam Fenelo by Fenelon by Brilliant.) Bendago's dam the famous prize-winner Julia by Le Fere

FOR SALE—Three 3-year-old stallions by Direct
When writing advertisers please mention Kansas Farmer.

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PERCHERON HORSES, and ABERDEEN-ANGUS CATTLE.

GARRETT HURST, Breeder, ZYBA, SUMNER COUNTY, KANSAS. Young stock for sale of either sex. All registered.

FOR SALE.

Percheron stallions and mares any age; Holstein-Friesian bulls, and Poland-China boars—leading strains represented.
H. N. HOLDEMAN, Rural Route No. 2, Girard, Kans.

HENRY AVERY & SON, BREEDERS OF

Pure Percherons.

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

Pleasant Hill Jack Farm.

PHILIP WALKER, Breeder, MOLINE, ELK CO., KANS
25 Mammoth, Warrior, and Spanish Jacks Now For Sale.
Quality and Breeding Unexcelled.
Inspection and Correspondence Invited.

Prospect Farm.



H. W. McAFEE, Topeka, Kansas, Breeder of OLYDESDALE HORSES, AND SHORTHORN CATTLE.
For Sale—25 Clydesdales, including 8 registered stallions of serviceable age, and 18 mares. Inspection and correspondence invited.

SHEEP.

CHEVIOT SHEEP, AND POLLED DURHAM CATTLE. Some fine rams for sale. The Cheviots are rustlers smooth, clean face, allowing clear vision to approaching danger. Write for prices and circulars.
A. E. BURLING, Knox City, Knox Co., Mo.

ANOKA FARM RAMBOUILLET AND COTSWOLD SHEEP.

GEO. HARDING & SON Importers and Breeders, WAUKESHA, WIS.
25 Imported, and 75 American Rams and 150 Ewes for sale. Our show flock at the Pan-American and all State Fairs this year was a sweeping success. Write us your wants and mention KANSAS FARMER.

LIVE STOCK ARTIST.

H. L. RITCHIE, 504 N. Y. Life Bldg., Kansas City, Mo. Sketching, and photographing live stock a specialty. Write for particulars.

Cheap-Rate Excursions Southwest

Only one fare plus \$2.00
October 15, November 5 and 19, December 3 and 17.
The Santa Fe most directly reaches the fertile valleys, industrial centers, and noted mining camps of Kansas, Oklahoma, Texas, Colorado, New Mexico and Arizona.
Go out and see the country for yourself.

Santa Fe.

Address T. L. King, Agent Santa Fe, Topeka, Kansas.



Percheron Stallions.

70 First Class Young Percheron Stallions
Now in our Shenandoah stables. Our last importation arrived October 1, 1901—mostly black, 3-year-olds, 30 imported stallions. An elegant string of 25 big two's and three's of my own breeding. Thirty years in the business. Come and see the horses.
M. L. AYRES, Shenandoah, Iowa

Riverside Stock Farm

O. L. THISLER, CHAPMAN, DICKINSON CO., KANS.
Importer and Breeder of PERCHERON, and FRENCH COACH HORSES, and SHORTHORN CATTLE.

For Sale—A few Shorthorn heifers, and Percheron stallions; also a Special Bargain on 9 Registered Hereford Bulls, 2 years old, and a few Full-blood Percheron Mares.

WE ARE NOT THE LARGEST IMPORTERS

In the United States, neither have we all ton horses. But we do make five importations each year. Our stables at Lincoln, Neb., and at South Omaha Union Stock Yards are full of first-class Percheron and Shire stallions. If you want a good one for what he is worth, it will pay you to see us. Our horses won sweepstakes in all draft and hackney classes at Nebraska State Fair. Address all correspondence to

WATSON, WOODS BROS. & CO., Lincoln, Neb.

SPECIAL NOTICE: Woods Bros., of Lincoln, Neb., have two cars of Shorthorn and Hereford bulls and cows at a bargain.



German Coach, Percheron, and Belgium Horses.

OLTMANN'S BROS., Importers and Breeders, WATSEKA, ILLINOIS.
Three Importations in 1901. 100 Stallions For Sale.

No other firm enjoys such buying facilities; the senior member being a resident of Germany is personally acquainted with the best breeders in France, Germany, and Belgium. We can save you money. Come and see us. We shall exhibit at the International Live Stock Exposition, Chicago, Dec. 1-7, 1901.

S. A. SPRIGGS, Westphalia, Kansas,

BREEDER AND DEALER IN

Registered Mammoth, and Imported Spanish Jacks and Jennets; Also Registered Stallions.



All stock guaranteed just as represented. Correspondence solicited.

SNYDER BROS., Winfield, Kans.,

Breeders of

POLAND-CHINA SWINE; SHIRE, CLYDE, AND PERCHERON HORSES, AND POLLED DURHAM CATTLE.

For Sale at Special Prices—17 BOARS, and 25 GILTS, farrowed mainly in November and December. They are extra well bred and very thrifty.
8 Polled Durham Bulls, of serviceable age. 17 Stallions over 2 years. 2 Mammoth Jacks.
Remember the three days' Combination Sale at Wichita, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Shorthorns by J. F. Stodder, and February 13, 1902, Draft horses by J. C. Robison and Snyder Bros.

DRAFT STALLIONS

Percherons, Shires, and Clydes.

We have a selection that are sure to suit you. As grand a lot of young stallions, of serviceable age as can be found in the country. We do not claim to have every color or kind of a stallion, you or anybody may want, but what we claim you will find if you pay us a visit. All of our selections are made by a member of our firm, who has been at this line of work the past decade and has absolutely a first choice from the leading breeders of Europe. Our last importation, consisting of the three great breeds, and 62 head in numbers were selected in the early part of February, before any of the shows and to-day are ready for sale. Write us, or come and see us, if you or your community are in need of the best to be found.



KEISER BROS., Keota, Keokuk County, Iowa.

America's Leading Horse Importers

Won at the Two Last Universal Expositions

At the Paris Exposition, 1900, our Percherons won Every First Prize with a possible exception.
At the Pan-American Exposition, Buffalo, 1901, our stallions won Every First Prize including the Grand Sweepstakes over all draft breeds.
We import more horses than any other three firms in America, and more prize-winners than all others.
We buy the best, can buy them cheaper and will sell them for less than anybody else.
If you want the kind that will improve your stock of horses, call on or write—

MCLAUGHLIN BROTHERS, COLUMBUS, OHIO.

LAWRENCE, KANS. EMMETSBURG, IOWA.



PERCHERONS.

J. W. & J. C. ROBISON, Importers and Breeders, TOWANDA, BUTLER CO., KANS.

LARGEST HERD IN THE STATE. IMPORTED, AND AMERICAN BRED STALLIONS AND MARES For Sale at all times.

Prices reasonable. Inspection invited. Seventeen young stallions for sale.

Remember the three days' Combination Sale at Wichita, Kans.: February 11, 1902, Poland-Chinas by Snyder Bros. and H. E. Lunt; February 12, 1902, Shorthorns by J. F. Stodder, and February 13, 1902, Percherons by J. C. Robison and Snyder Bros.



Agricultural Matters.

Annual Report of the Secretary of Agriculture, 1901.

The fifth annual report of the Secretary of Agriculture, Hon. James Wilson, is considerably larger than in former years, reflecting thereby the great growth and development which has attended this department during his administration.

WEATHER BUREAU.

He announces an important extension of the forecast field of the weather bureau, which now includes reports from certain points in the British Isles and on the continent of Europe, from the Azores, Nassau, Bermuda, and Turks' Island. The Atlantic forecasts based upon these reports now form part of the regular night forecasts issued in Washington. Three new forecast districts have been established—Boston, New Orleans, and Denmark. An extension of the forecast to farmers through the Rural Free Delivery is contemplated. Substantial improvements are reported in the department's system of wireless telegraphy, of which the Secretary states in conclusion:

"While there is much experimental work yet to be done before the present system is reliable for intership communication, or before any two systems can work within the same field without each rendering the other useless, such progress has been made by the Government experimenters that, with no interference by private systems, stations can be successfully operated over at least 150 miles of coast line, and they are now in operation on the North Carolina and Virginia coasts, and soon will be instituted between the Farallone Islands and the mainland and Tatoosh Island and the mainland, on the Pacific coast."

ANIMAL INDUSTRY.

A large portion of the report covers the subject of animal industry. The grand total of animals and animal products exported during the year exceed \$250,000,000 in value. This vast foreign market is only preserved to our producers by the indefatigable efforts of the department and the rigid inspection exercised through the Bureau of Animal Industry. This bureau inspected for export 385,000 cattle, 228,000 sheep, and 48,000 horses and mules, and nearly 1,000 vessels carrying live stock. Imported animals were also inspected to the number of 342,000, and, where necessary, quarantined. The Secretary suggests that with the enormous interests our stock-raisers have at stake, and inspection or quarantine affording after all, a relative, not an absolute guarantee of protection, it might be well for this country to follow the example of Great Britain and exclude live stock from other countries entirely. The meat

I Will Cure You of Rheumatism.

No pay until you know it.

After 2,000 experiments, I have learned how to cure Rheumatism. Not to turn bony joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask for no money. Simply write me a postal and I will send you an order on your nearest druggist for six bottles of Dr. Shoop's Rheumatic Cure, for every druggist keeps it. Use it for a month, and if it does what I claim pay your druggist, \$5.50 for it. If it doesn't I will pay him myself.

I have no samples. Any medicine that can affect Rheumatism with but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most difficult, obstinate cases. No matter how impossible this seems to you, I know it and I take the risk. I have cured tens of thousands of cases in this way, and my records show that 39 out of 40 who get those six bottles pay, and pay gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal card or letter. Let me send you an order for the medicine. Take it for a month, for it won't harm you anyway. If it cures, pay \$5.50. I leave that entirely to you. I will mail you a book that tells how I do it. Address Dr. Shoop, Box 529, Racine, Wis.

Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

inspection service involved the inspection at time of slaughter of nearly 37,000,000 animals. Of the more than 5,000,000 cattle inspected, the condemned carcasses were about 1/4 of 1 per cent; of the 6,500,000 sheep, 1-10 of 1 per cent; and of 24,000,000 hogs, 1/2 of 1 per cent. In the control of indigenous diseases, 1,500,000 inspections were made and over 45,000 cars disinfected in the Texas fever service alone. In the repression of scabies in sheep nearly 8,000,000 animals were inspected, and over 1,000,000 dipped under the supervision of the department inspectors. In combating the disease known as "Black Leg," the bureau distributed over 1,500,000 doses of vaccine, the result being to reduce losses in affected herds to less than 1 per cent, where formerly it was in most cases about 10 per cent. To aid in detecting tuberculosis in cattle and glanders in horses, over 44,000 doses of tuberculine and 7,000 doses of mallein have been supplied. The secretary points out the serious evil resulting from a system of State inspection, which, if it become general, would effectually prevent the marketing of live stock in some sections, and would destroy much of the usefulness of the federal inspection. He regards the present conditions as so menacing to the interests of the cattle industry in the West and Southwest that he has requested the Attorney General to cooperate in bringing the matter before the Supreme Court for decision as to the constitutionality of these State laws. This request has been favorably received and the assistance of the department of justice promised.

PLANT INDUSTRY.

The organization of the bureau of plant industry is reported. It has brought together in one group investigations in plant physiology and pathology, botany, grasses, and forage plants, pomology, and the experimental gardens and grounds, including the experimental farm at Arlington and the introduction of foreign seeds and plants.

PLANT PHYSIOLOGY AND PATHOLOGY.

Investigations in plant physiology and pathology have been lately devoted to the study of cotton diseases, diseases of orchard fruits, and of forest trees and construction timber. An interesting discovery to cotton growers is reported of a cow-pea resistant to the fungus that destroys the cotton roots. The cow-pea being used in rotation with cotton, the securing a resistant cow-pea will be of the greatest possible value to cotton growers. Remarkable success is reported in experiments in plant-breeding to secure samples of cotton resistant to wilt and other diseases. Numerous valuable hybrids have also been developed. One from an American upland cotton and an Egyptian variety promises to be greatly superior to either parent. The department has been for several years trying to secure by breeding a race of oranges resistant to frost. A cross of hardy Japanese with the Florida sweet orange has resulted in the hardest evergreen orange known and there is promise of ultimately securing a fruit both hardy and of good quality. Considerable success has also been attained in breeding raisin grapes resistant to the disease known as "coulure."

BOTANICAL INVESTIGATIONS.

In botanical investigations important work has been done on seeds, improvement of crops, and methods of crop production in our tropical possessions, and prevention of losses to cattle in the West from eating poisonous plants. The low germination of commercial samples of Kentucky blue-grass seed was investigated. It was found that there is a stage in harvesting this seed when heating takes place in the tops of the grass, piled in windrows, which tends to destroy the germination of the seed. This can be avoided by methods of handling the grass, but the department is experimenting with machinery which will dry the moist seed without permitting it to heat. Comparative experiments regarding the relative value of American and European clover seed give results strongly in favor of the former, at least under conditions prevalent in this country. A remedy has been found which, when promptly administered, is effectual in the treatment of animals poisoned from larkspur and poison camas. The agricultural conditions of our new possessions are being thoroughly studied, and special attention is being given to the production in these possessions of tropical crops, for which the United States pays out millions of dollars annually. Raising coffee

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in Porto Rico has been the subject of special study. Our annual importations of this valuable crop now amount to \$70,000,000. The Secretary asserts that much loss has resulted to the cattle industry in the West in recent years owing to the injudicious management of ranges. The department's experiments show that much could be done, under proper control, to restore the ranges to their original condition, and he recommends action by Congress, giving the President authority to secure for the experimental needs of his department such tracts of public range lands as may be necessary.

POMOLOGICAL INVESTIGATIONS.

The pomological investigations have been especially directed to the extension of our fruit markets abroad and to the encouragement of the domestic production of fruits hitherto largely imported. Prune growing has been made the subject of special study; also the growing of European grapes in the South. Attention is called to the rapid increase in our exports of apples, since the magnificent showing made by this department of this fruit at the Paris Exposition.

ARLINGTON FARM—TEA EXPERIMENTS.

Progress is reported in preparing the Arlington farm to serve in conducting experiments, as an adjunct to the department. The Secretary cordially commends the experimental work now carried on at Summerville, S. C., under the direct supervision of Dr. C. U. Shepherd. About 4,500 pounds of high-grade tea, which found a ready market, were produced here during the year.

INTRODUCTION OF VALUABLE SEEDS AND PLANTS.

Great activity has characterized the introduction of valuable seeds and plants from abroad, with most satisfactory results. The development of the rice industry in Louisiana and Texas since the introduction by the department of the Japanese rice, during the past three years, has been remarkable. At the same time our imports of this product have decreased from 154,000,000 to 73,000,000 pounds. The United States imports yearly nearly \$800,000 worth of macaroni. Macaroni wheats have been introduced in the past two years very successfully into the Dakotas and also into Kansas and Nebraska. Fully 90 per cent of the date palms introduced in recent years from Africa are now growing vigorously in Arizona and southern California. This year a collection of the choicest varieties in Egypt have been obtained. Progress is reported in the introduction of Egyptian cotton. The imports of this product now amount to about \$3,000,000 yearly.

CONGRESSIONAL SEED DISTRIBUTION.

In regard to the Congressional seed distribution, the Secretary states that he has endeavored to meet the wishes of Congress in every way possible, and to secure seeds of as high a character as can be obtained under the conditions under which the work is done. It has been arranged to send out cottonseed, tobacco seed, sorghum seed, and sugar-beet seed, and grasses and forage plants under the direct auspices of the department, and not through the contractor.

SOIL SURVEY.

An extensive review of the work of soil survey shows that the areas surveyed and mapped during the year exceed 3,500,000 acres, making a total of nearly 6,000,000 acres surveyed during the past two years. The field work, including preparation of reports, transportation, and supplies, has cost an average of \$3.26 per square mile, or about 51 cents per hundred acres. A part of the expense has been paid by State organizations, and effective cooperation has been had with the stations. The demands for soil survey in various parts of the country continue to be received in excess of the ability of the bureau to comply. The Secretary enumerates sundry important results in the work of the survey, but dwells especially upon what has been achieved in connection with tobacco. Especially successful have been the experiments made by the bureau in the growing of a fine type of Sumatra leaf on certain soils in the Connecticut Valley. During the past year nearly 43 acres have been grown under the direct control of the department experts. An interesting feature of the experiment is that the bulk of the cost, estimated at \$20,000, has been invested by the farmers themselves, and it is gratifying to record that their enterprise has been rewarded far beyond their expectations. The recommendations of the department have also been followed in the methods of curing tobacco in Pennsylvania, with the result of effecting a saving from the ravages of the black rot, exceeding 1/2 million



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dollars. Urgent demands for assistance in the tobacco industry have reached the department from New York, Wisconsin, Texas, and Florida. Referring to the reclamation of alkali lands, to which attention has frequently been called in the reports of the soil survey, the Secretary says that he is more and more convinced that to carry the lesson home to the individual it will be necessary for the department itself to undertake a practical demonstration of the efficiency of drainage. The necessity of a special study of climatology in connection with the soil work is pointed out. "The time has come," says the Secretary, "when the work should be taken up on a scale commensurate with the extension of at least two or three crop interests. It is certain that the immediate benefit to the farmers will amply repay expenditure."

WORK OF THE BUREAU OF CHEMISTRY.

In this bureau investigations into the composition, nutritive value, and adulteration of food products have been continued. This work during the year was devoted particularly to the study of preserved meats, the composition and nutritive value of the preserved article being compared with the original, and the preservatives, if any were employed, determined. Food products imported into this country, and suspected of adulteration or of containing injurious constituents, have also been examined. The Secretary is authorized to inspect, through the Bureau of Chemistry, American food products intended for export. Unfortunately, Congress has not provided appropriations adequate to the proper execution of this law. The Secretary adds that it is important that our food products going abroad be pure and wholesome, and that we should protect our exporters against discrimination in foreign countries.

In connection with the Bureau of Forestry, the Chemist is taking up the work of forest chemistry, and is studying forest trees in their relation to the soil and the products they yield. Among the chemical industries immediately dependent on forest productions are the tanning industry, manufacture of wood pulp, production of wood spirit, charcoal, and other products. The sugar laboratory of the bureau continues to study all the chemical problems relating to the production of sugar-producing plants and the manufacture of sugar. The chief part of this work is devoted to the study of sugar beets. The work that the Bureau of Chemistry is doing for other departments of the Government is considerable and constantly increasing. By agreement with the Secretary of the Treasury, the Chief of the Bureau has been designated as supervisor of sugar tests in the laboratories of the appraisers in the ports of New York, Philadelphia, and Boston. The other departments to which the aid of the Bureau of Chemistry has been extended are the War Department, the Post-Office Department, the State Department, and the Department of the Interior.

In cooperation with the Office of Public Road Inquiries, a laboratory for the study of road material has been organized in the Bureau of Chemistry. The prime object of this laboratory is to aid road builders in selecting the best available materials in their localities.

WORK OF THE BUREAU OF FORESTRY.

Another of the newly organized bureaus is that of forestry. The Secretary reports that this bureau is cooperating with the federal Government, with several States and many private owners in handling their forest lands. Altogether, assistance has been asked for a total area of 52,000,000 acres, of which 4,000,000 are held by private owners. The work of forest management is reviewed in some detail. During the year nearly 800,000 acres under private owners were examined by representatives of the bureau, and four detailed working plans, covering 226,000 acres were prepared. The working plan for the Black Hills forest reserve was completed and working plans were undertaken for the Prescott and Big Horn, and the Priest River reserves.

Forest investigations include the study of commercial trees, and economic tree planting, of forest fires, grazing, lumbering, forest productions, and other important lines. The region containing the proposed Appalachian forest reserve was examined in cooperation with the United States Geological Survey and nearly 10,000,000 acres were mapped, lands classified, and the forests carefully studied. The Secretary regards the creation of the proposed forest reserve as urgent in order to pro-

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tect the head waters of important streams, to maintain the already greatly impaired supply of timber, and to provide a national recreation ground. Upon the request of the Secretary of the Interior, the effects of grazing and forest fires were investigated on 12 of the forest reserves.

In the study of economic tree planting in cooperation with farmers and others in making forest plantations, 46,145 acres were examined and plans were prepared for nearly 6,000 acres, while 148,000 applications for tree-planting plans were received.

THE OFFICE OF EXPERIMENT STATIONS.

The Secretary reports as the result of a broad inquiry made through the Office of Experiment Stations that by far the largest part of the work of the stations has direct relation to the important agricultural interests of the communities in which they are located.

The work of the stations is becoming better understood by the farmers, and a broader, deeper foundation of scientific inquiry is being laid each year. Cooperation between this department and the stations continues to increase, and the value of those cooperative methods to the agricultural interest are very generally acknowledged. As a result of the practical confidence so attained, Congress and the State legislatures have shown a disposition to be liberal with this department and with the stations. The movement for the separation of the office of director of the stations from that of president of the college has advanced, and at present there are but 11 States and Territories in which the college president exercises the functions of director of the station. At the same time, the amount of teaching required of station officers has been materially reduced.

The experiments of the station in Alaska, with headquarters at Sitka, and subsidiary stations at Kenai, on Cook Inlet, and at Rampart in the Yukon Valley, are regarded as distinctly encouraging. From all the evidence received at the department, it seems clear that agriculture may be sufficiently established in this territory to serve as an important aid to the mining, lumbering, and fishery industries. During the year a station has been established in Hawaii. Among the first work at this station was the planting of a taro, with the special object of studying the diseases seriously affecting that crop. Probably 50 per cent of the working population in these islands depend on taro for their daily food, and, owing to these diseases and the attendant deterioration of the crop, the price of taro has increased 500 per cent in the last decade. Some other diseases of fruits and vegetables call for study, and poultry experiments have been inaugurated with a view to increasing the supply of poultry. It is reported that live chickens sell in Honolulu at \$15 a dozen, and

eggs at 40 to 50 cents a dozen. Hogs bring from 10 to 17 cents a pound on the hoof, and experiments have been undertaken in the feeding of swine with various tubers and roots.

The station at Porto Rico has not yet been fully established, owing to the difficulty of securing suitable land for the purpose. In the meantime, such investigations will be undertaken as can be pursued on lands leased or loaned by persons ready to engage in cooperative work with the station director. Some preliminary investigations in coffee culture have already been arranged for.

The Secretary earnestly recommends that the annual appropriations for all these stations be increased to \$15,000, the same as the National Government contributes at present to all of the other stations in the various States and Territories.

THE PHILIPPINES.

He regards it as extremely desirable that agricultural investigations should be undertaken in the Philippine Islands under the war department and in cooperation with the department of agriculture. In furtherance of this work, the Secretary recommends an additional appropriation of \$15,000 for the ensuing fiscal year "to institute agricultural investigations in the Philippines, and, if feasible, to locate and maintain an agricultural experiment station there."

AGRICULTURAL EDUCATION.

An increase in college extension work in agriculture is noted and stress is laid on the movement for the establishment of secondary schools of agriculture and the introduction of the elements of agriculture into the rural schools, as hopeful signs of progress in agricultural education. The Secretary suggests that his department, already giving aid to rural schools in various ways, should take a still more active part in encouraging this work. He recommends encouragement by distributing seeds and plants to establish school gardens, by furnishing schools with collections of specimens of insects, of plant diseases, and other illustrative material, and by supplying the teachers with such publications of the department as may be useful to them.

AID TO FARMERS' INSTITUTES.

He reviews very fully the great development in the work of farmers' institutes. In 1899 over 2,000 farmers' institutes were held in this country, attended by over half a million farmers. These were held in 43 States and Territories. The Secretary thinks that there is room for much useful work by his department in aid of this and other movements for the education of our farmers in the improvement of our agriculture. He has, therefore, asked for a special appropriation of \$5,000 to enable the Office of Experiment Stations to enlarge its work with a view to giving definite aid and encouragement

to farmers' institutes in the different States.

DIETARY STUDIES.

The dietary studies, experiments in cooking, digestion, and metabolism have been conducted in various parts of the United States in cooperation with experiment stations, agricultural colleges, and universities. The results of nutrition investigations already made should, the Secretary thinks, be practically and beneficially applied to the feeding of men wherever a considerable number of persons are to be fed on a systematic plan. He instances the hospitals for the insane in the State of New York, the annual cost of food for which is over \$1,000,000, and states that of the \$26,000,000 expended for 100,000 persons maintained in the public institutions in New York State alone, \$6,000,000 is expended for food. He urges investigations to determine the best dietary for the use of our soldiers and civil officers in tropical regions and states that a special appropriation of \$5,000 has been asked for the study of the food supply and consumption of people living in the tropics.

IRRIGATION MATTERS.

The Secretary devotes a great deal of space to a discussion of irrigation investigations. These have been conducted through the Office of Experiment Stations, and embrace (1) studies of irrigation laws and the social and indus-

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trial institutions of irrigated agriculture, (2) investigations of the methods by which water is conserved, distributed, and used.

TITLES TO WATER.

In reference to the first subject the Secretary states that the character of the titles to water finally recognized will do more than all other influences combined to determine whether the Western farmers ought to be tenants or proprietors. Naturally, this makes the disposal of the water resources of the West a matter of vital importance not only to the persons directly interested, but to the country at large. Every consideration which justified the general government in the control, the survey, and disposal of public lands, applies equally to the orderly and just establishment of titles to water by public authority, either State or national. He points out the confusion and trouble and almost endless litigation frequently attending the settlement of this question, and declares it to be absolutely necessary that some simple and final method of determining and protecting rights to streams should be provided. In the meantime the conditions, as they exist in arid States, are being carefully studied by the department.

IMPROVED INSTRUMENTS.

Irrigation experts of the department have designed improved instruments for measuring water, by which registers are now furnished to irrigators at about one-half the cost of the foreign instruments.

IRRIGATION IN HUMID REGIONS.

Attention is directed to the growth of irrigation in the humid regions, and the remarkable fact is stated that in Louisiana more money has been expended on pumping plants in the past two years than in any arid State. By irrigation, rice growing in Louisiana and Texas has raised the price of land originally worth \$5 to \$10 per acre to \$50 and even \$100 per acre.

LEGISLATION BY CONGRESS.

The Secretary expresses the belief that irrigation will, in the near future, become a subject for legislation by Congress, there being important reasons why it should have the attention of that body. At the same time, he says, that those best informed believe that the uncertain character of water rights can only be remedied by a larger measure of public control and the making of certain classes of irrigation structures permanently public works. These, it is urged, should not be owned by private parties, and the argument produced in favor of constructing reservoirs by act of Congress is the same which justifies setting aside forest reserves and the maintaining of a force to control them. On the other hand, the Secretary points out that an appropriation of money by Congress to construct such irrigation works will bring the country face to face with a new Government policy, and will carry a larger measure of public control over the water resources of the West than has hitherto prevailed or been sanctioned by public sentiment.

LAND LAWS EFFECTING IRRIGATION.

He reviews the influence of land laws on irrigation development, stating that laws which control the disposal of 500,000,000 acres of arid public lands must have a vital influence upon the success of irrigated agriculture. He condemns the desert-land act, stating that 640 acres is more land than a man of moderate means can cultivate under irrigation. Cutting down the entries from 640 to 320 acres is an improvement, but he believes in the entire repeal of the desert-land act and in requiring settlers or homesteaders to cultivate as well as live on their land.

THE GRAZING LANDS.

Referring to the grazing lands, he says probably 400,000,000 acres of the public domain has no agricultural value except for pasturage. It is at present an open common, with no laws for its protection or disposal. He refers to the frequent conflicts of the farmers under irrigation with the range stockmen, and recommends, as a remedial and beneficial measure, the leasing of the grazing land in such a way as not to interfere with the homesteader. The rentals, he believes, would amount in the aggregate to a large sum, which could be appropriately applied to the reclamation of the irrigable lands. He points out that such leasing is not an experiment, to it has been successfully tried, although in a limited way, in Colorado, Idaho, Montana, Nebraska, Utah, and Wyoming. He winds up the discussion of this subject by presenting the following conclusions:

"(1) That private enterprise will have to be supplemented by public aid in the construction of certain classes of

irrigation works if we are to secure the largest development of Western agriculture.

"(2) That reservoirs located in the channels of running streams should be public works.

"(3) That the first step toward national aid for irrigation should be the passage of enlightened codes of water laws by the States to be benefited.

"(4) That the land laws should be modified by repealing the desert act and by requiring cultivation as well as residence on a homestead.

"(5) That the nonirrigable grazing lands should be leased in small tracts so as to unite the irrigable and the pasture lands."

WORK IN ENTOMOLOGY.

Under this head the Secretary reports the successful introduction and establishment in California of the fig-fertilizing insect, with the result that it has been thoroughly established at several points, and that the Division of Entomology is now ready to supply fig insects to any grower after he has succeeded in raising to the bearing stage caprifig and Smyrna fig trees. The discovery is reported by an expert of the division sent to Asia for the purpose, that the San Jose scale is not indigeneous to the Japan, but that it is so in north China. It has been found in a section of that country where there have been no fruit importations, and all fruits are of native sorts. Further, in this district, it was found to have a natural enemy—a ladybird beetle, of which the expert in question has collected many specimens and forwarded them to Washington, and steps will be taken to acclimatize this important species. This importation will doubtless prove of extreme value to fruit growers in this country. Another valuable importation of the ladybird beetle was of one which feeds upon several distinct species of plant lice accidentally imported into this country from Europe.

PUBLIC ROADS.

In establishing an Office of Public Road Inquiries, the object was to promote the improvement of public roads throughout the country. Efforts were first directed to ascertain the condition of the roads, the state of public opinion in regard to their improvement, the obstacles in the way, and the best methods to be employed in securing better roads—such has been the work of this office up to the present. For spreading information and awakening interest, nothing has been found so effectual as the "object-lesson" or sample roads which, during the past year, have been built in 9 States under the advice and supervision of the office. In building these sample roads, machines have been loaned by manufacturers and carried free by the railroad companies, while the local community furnishes material and labor. During the year, for the better carrying out of the work of the office, the United States was divided into 4 divisions, the eastern, middle, western, and southern, each under a special agent.

PUBLICATIONS.

In the performance of its duty to diffuse the information acquired through its several bureaus, divisions, and offices, the main dependency is upon the issue and distribution of publications. This work, therefore, affords a fair reflex of the intelligence and activity of the investigating branches of the department. The secretary deprecates the fact that this condition has not been as fully recognized in the appropriations as it should be, and the work of publication has therefore not kept pace with the wonderful growth and development of the department. He deprecates particularly the unavoidable suspension toward the close of the year of the work both of printing and distribution, and that no less than 35 worthy employees had to suffer distress by being furloughed through no fault of their own. Notwithstanding these restrictions, there were issued during the year 606 separate publications, aggregating nearly 8,000,000 copies. Nearly 3,500,000 copies were farmers' bulletins, of which two-thirds in round numbers were distributed under Congressional orders. With the increased appropriation and the accumulated copies, this year's supply of these bulletins will, under the present law, which assigns four-fifths, instead of two-thirds, to the use of Congressmen, make the allowance of each senator, representative, and delegate 15,000 copies. A special building has been rented to be devoted exclusively to the storage and shipment of farmers' bulletins, of which not less than 7,000,000 will have to be printed this year. The amount provided, however, for material and labor in their distribution is quite inadequate and must be supplemented by a special appropriation, if the demands of Congressmen are to be

FAINTING.

Is it Only a Fashionable Feminine Accomplishment?

In the novels of a generation or so back, fainting seems to be generally regarded as an accomplishment of a fashionable woman. Whenever there was an awkward situation to be covered the woman discreetly and decorously fainted. It is also insinuated that place as well as time had to be considered in the fitting exercise of this accomplishment. There must be a convenient couch to lie on and still more there must be a pair of manly arms to support the limp burden as it swayed and slipped to the ground. Women did not as a rule exhibit this accomplishment for the benefit of their own sex, but only when some observant male was at hand to see and succor.

The heroines of the modern novelist are not given to fainting. The "accomplishment" seems to have gone out with the working of samplers. Weakness was once a woman's weapon. Now she



despises weakness, and all its symptoms. It may be taken for granted therefore that now-a-days if a woman faints it is because of genuine weakness that she can not conceal. Instead of wanting male observation she avoids it and despises herself for her own frailty.

WHY WOMEN FAINT.

In general women who faint are more liable to do so at some special periods than at others, and the liability to faint is generally increased with the recurrences of the periodic womanly function. From this fact alone it might be fairly argued that there is a close relation between local womanly weakness and the physical weakness which causes women to faint. Womanly ailments surely undermine the general health. Irregularity, suppression, profusion, unhealthy drains, inflammation, ulceration, and female weakness, are the diseases which drain the vitality and weaken general health of women and render them liable among other things to "fainting spells." Cure the local womanly diseases and there is at once a gain in the general health.

"It gives me great pleasure," writes Miss Ella Sapp, of Jamestown, Guilford Co., N. C., "to thank Dr. Pierce for the great good received from the use of his 'Favorite Prescription' and 'Golden Medical Discovery.' I had suffered for three years or more at monthly periods. It seemed as though I would die with pains in my back and stomach. I could not rise to my feet at all without fainting; had given up all hope of ever being cured, when one of my friends insisted upon my trying Dr. Pierce's Favorite Prescription. With but little faith I tried it, and before I had taken half a bottle I felt better, had better appetite and slept better. Now I have taken two bottles of 'Favorite Prescription' and one of 'Golden Medical Discovery,' and am happy to say I am entirely cured, and all done in two months' time when all other medicines had failed to do any good at all."

met. Referring to the great demand for the yearbook and the growth of the department, the secretary points out the inadequacy of the quota assigned the department. When the edition of this work was 300,000 copies, 30,000 were placed at the disposal of the department, the same as now, notwithstanding that the edition to-day is half a million copies. The demand for the publications of the department continues to be greatly in excess of its ability to supply.

WEAK WOMEN MADE STRONG.

Doctor Pierce's Favorite Prescription makes weak women strong and sick women well. It does not matter how great is the weakness or how chronic the sickness. "Favorite Prescription" may be used with the utmost confidence and assurance that it will cure and strengthen if the disease lies within the bounds of a medicinal cure. In many a case where local physicians have said there was no aid in medicine and pointed to a hazardous operation as the only alternative to a life of suffering, the use of Dr. Pierce's "Favorite Prescription" has resulted in a perfect and permanent cure. It is such cures as these which have given "Favorite Prescription" pre-eminence among medicines for the cure of woman's diseases.

"I suffered for twelve years with female trouble," writes Mrs. Milton Grimes, of Adair, Adair Co., Iowa, "which brought on other diseases—heart trouble, Bright's disease, nervousness, and at times would be nearly paralyzed. Had neuralgia of stomach. I can freely say your medicines (nine bottles is all, five of 'Favorite Prescription,' four of 'Golden Medical Discovery' and two vials of Dr. Pierce's Pleasant Pellets), have cured me. I can work with comfort now, but before I would be tired all the time and have dizzy headache, and my nerves would be all unstrung so I could not sleep. Now I can sleep and do a big day's work, something I had not done for over eleven years before."

"You have my consent to publish this testimonial, hoping it will be the means of helping some other invalid."

WOMEN ARE THE WITNESSES.

It is the women who have acclaimed Dr. Pierce's Favorite Prescription as the greatest and best medicine for the cure of womanly diseases. The witnesses to its power are the women it has cured. There are hundreds of thousands of healthy women to-day who have been restored by "Favorite Prescription" to a happy, useful life after years of suffering, and years of useless medical treatment. If you are suffering from any disease peculiar to women there is every motive for you to try Dr. Pierce's Favorite Prescription and every encouragement to expect a complete cure. No matter how severe the disease, the wonder will be not that "Favorite Prescription" cures you, but that it should fail to do so. Its cures are so uniform, so reliable, that if it did not cure you, you would stand alone, a wonder and a marvel, a solitary exception among hundreds of thousands of weak women who have been made strong and sick women who have been made well by the use of this great remedy.

"Favorite Prescription" establishes regularity, dries weakening drains, heals inflammation and ulceration, and cures female weakness. As a tonic and nerve for weak, worn-out, run-down women, it is without an equal. It promotes the appetite, tranquilizes the nerves, and induces refreshing sleep.

If you are led to the purchase of "Favorite Prescription" because of its remarkable cures of other women, do not accept a substitute which has none of these cures to its credit.

A HELP FOR WOMEN.

"I received the 'Medical Adviser' and am much obliged for it," writes Mrs. Elmer D. Sheare, of Mount Hope, Lancaster Co., Pa. "I would not part with it if I could not get another in its place, as it is a help every woman should have."

Dr. Pierce's Common Sense Medical Adviser, containing more than a thousand large pages and over 700 illustrations is sent free on receipt of stamps to pay expense of mailing only. Send 31 one-cent stamps for the volume bound in cloth, or only 21 stamps for the book in paper covers. Address Dr. R. V. Pierce, Buffalo, N. Y.

Many of these—over 24,000 copies last year—were sold by the Superintendent of Documents. This is almost three times as many as the sales made by that officer of the publications of all other Departments of the Government. A special appropriation has been asked for to carry on more effectively the work of illustration, which the condition of the appropriations in recent years has caused to be somewhat neglected. Over 140 persons are employed, including ed-

itors, proof readers, artists, clerks, and laborers, in the work of publications, and these are greatly hampered, owing to their segregation in different buildings in crowded and inadequate quarters.

EXPORTATION OF AGRICULTURAL PRODUCTS.

The highest record previously attained in the export of agricultural products—in 1898—was surpassed by over \$90,000,000 in the fiscal year of 1901, when a value of over \$950,000,000 was reached. Of the merchandise sent abroad during the year, 65 per cent originated on the farm. Of foreign customers for our agricultural products, the United Kingdom stands first, taking over 50 per cent. The next most important markets are afforded by Germany, France, the Netherlands, and Belgium, in the order named. The Section of Foreign Markets has begun the preparation of a most comprehensive report on the character of our agricultural importations received by the United Kingdom from countries other than the United States. The importance of this report is evidenced by the fact that large as were our exports to the United Kingdom, they comprised only one-third of the foreign farm produce purchased by that country. Special statistics have been compiled by the Section of Foreign Markets relative to our trade in farm products with our new insular possessions. Our agricultural exports to Cuba, Poto Rico, and the Philippines during the year comprised about 53 per cent of the domestic merchandise sent to these islands. Our imports of agricultural products from these islands exceeded our exports by just \$30,000,000.

ACCESSIONS TO THE LIBRARY.

Over 4,000 books and pamphlets were added to the library during the year. These included many books of special value in the work of the department and a large number of scientific periodicals. Every effort is made in the library of the department to meet the demands occasioned by the constantly broadening fields of investigation entered upon by the department and to aid educational and scientific workers engaged elsewhere upon kindred work. The department library is regarded as the headquarters of agricultural literature, and should be able to meet demands from without as well as within the department. The secretary calls attention to the danger of destruction by fire of the 70,000 pamphlets and books now in the library owing to the character of the building at present occupied by the department.

ACCOUNTS AND DISBURSEMENTS.

Congress appropriated \$3,303,500 for the United States Department of Agriculture for the fiscal year ended June 30, 1901, being an increase of \$558,920 over the appropriation for the preceding year. When all accounts shall have been finally settled the payments will amount to about \$3,220,000.

The regular appropriation of \$15,000 for each of the 48 agricultural experiment stations in the several states was also made.

On June 30, 1901, the unexpended balance of the appropriations for the year 1899, amounting to \$28,899.27, were covered into the treasury.

During the year \$6,340 was paid for rental of leased buildings in Washington. Owing to inadequate accommodations Congress, at the last session, provided for the lease of additional buildings, and the rental for the fiscal year 1902 will exceed \$10,000.

BIOLOGICAL SURVEY.

The Survey is engaged in mapping the natural boundaries of the crop belts of the country. Its aim is to furnish farmers with lists of products likely to be successful, so far as climatic conditions go, in different parts of the country. During the past season the work mapping the life zones and crop belts has been continued, particularly in Texas and California. A fiber plant, closely related to the Mexican istle or Tampico plant, is found growing in great abundance over a large part of the arid Sonoran zone. In view of the great quantity of fiber of other species of agave imported into this country (\$12,000,000 worth in 1900) the Texas species is likely to prove of great value.

In response to constant complaints, the survey has prepared and distributed a circular of direction for the destruction of prairie dogs, and is now conducting experiments in the Dakotas, Nebraska, Kansas, and Texas, with a view to discovering remedial measures against this pest, cheap enough for general use. It has been discovered that the Bullock oriole and the California least tit feed extensively on the orange and olive. In Texas the large blackbirds, known as jackdaws, and which have been slaughtered in great numbers for the millinery

trade, are particularly useful owing to their feeding habits in the rice and cabbage-growing districts. In addition to its other duties, the survey is charged with the general supervision of matters relating to game protection. In aid of the preservation of native birds and game it has published bulletins on the laws governing the transportation and sale of game, digests of State game laws, etc. Carrying out the provisions of the Lacey act, the secretary acknowledges his obligations to three other Executive Departments, the Treasury, Interior, and Justice, to several railroad and express companies, and to many State officials and individuals. Under the system of permits established for the transportation of foreign wild animals and birds, 186 permits were issued during the year, covering the entry of 350 animals and nearly 10,000 birds. Numerous violations of the laws regulating interstate commerce and game have been reported to the department and in many instances it has been called upon to assist in prosecuting the offenders.

THE DIVISION OF STATISTICS.

The work of this division consists largely in the preparation of reports relative to the principal products of the soil, including the extent and geographical distribution of the area of production, the condition and prospects of the crops during the growing season, and the quantity, quality, and disposition of the products harvested. It has included also reports on various branches of rural economics, such as transportation, wages of farm labor, cooperation in agricultural industries, etc. An urgent demand exists for broadening the scope of the work of this division. But this can not be done without enlarging its appropriations. Telegraphic interchange of crop reports has been arranged for with the governments of some of the principal grain-growing countries of Europe. In furtherance of the plan to place the crop reports in the hands of the farmers as early as possible, a system of cards containing the most important points of the Statistician's monthly report has been adopted. These cards are mailed promptly after publication of the telegraphic summary to postmasters throughout the country with the request that they be promptly displayed in their offices. The secretary recommends the enlargement of the division under bureau organization.

CONCLUSION.

The report concludes with a review of the development of agriculture and commerce during the past twenty years, and of the contributions by the department of agriculture to the progress of events and the building up of domestic and foreign trade. The secretary says that coincident with this growth numerous institutions have grown up in this country and abroad, devoted to the application of science to the service of agriculture, thus creating a great demand, at good salaries for the right sort of men. Each nation is seeking to extend its productions, and is depending more and more upon the aid of science. Men combining knowledge with practical experience and ability are hard to get, hence the department has to face the necessity of paying much higher salaries or of being compelled to either lose opportunities of getting the best men or to lose some of those who, under its training, have developed such qualities as make them exceptionally valuable.

He concludes by saying that he would urge upon Congress, in the strongest terms and for the best interest of the country, such liberality as will enable him to obtain and retain the best men that can be found to fill the important places at his disposal.

The Agricultural Experiment Stations.

Some excellent suggestions to experiment stations are offered by a late writer in the Iowa Homestead.

He says:
THE EXPERIMENT STATION FOR EXPERIMENT.

The experiment station is essentially intended for experiment and not for the recital of experience. There is this difference between the two, as was defined by Coleridge, when he said an experiment was the headlight in the bow of the boat throwing light on things ahead, while experience was a light in the stern making clear the results from what has been passed over. If the experiment station does not carry on investigations which help the farmer to forecast his work, it is not serving its purpose. If it simply relies on experience, it is then entering a field in which the farmers are much stronger than the station may hope to be. The application of this observation is very often overlooked by many of the stations which issue bulletins that contain nothing but experience. While such bulletins were useful in an early day, and while they may be properly the work of a department, such as that of the issuing of farmers' bulletins by the government, yet it can hardly be claimed to be a legitimate feature of the work of the experiment station. Such works mean a continuous discussion of old and settled subjects. For instance, there is hardly a farmer who has ever fed any stock but knows that it is more satisfactory in results and labor to feed them in yards than it is to put them in stalls, under Western conditions, and yet we find at this late day the reports of experiments bearing on these practices. Again, as late as this fall, a discussion of the codling moth continues to be a subject for discussion. The same old illustrations, which should be tiresome to everyone who has taken any interest in bulletins or station work, are still doing service, much the worse for wear, and in other ways showing their ancient origin. While it may be possible that there are some circumstances regarding the repetition of this information, yet it would be hard to justify their publication without at least the addition of something new in regard to them. These are single instances among many which show that all the stations are not considering the desirability of doing original work, and especially that which is applicable to the State conditions.

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STATE PROBLEMS.

It adds greatly to the effectiveness of station work and gives each station a peculiar reason for existence, when the attention of those in its employ is turned towards the solving of State problems. There is a vast duplication of feeding experiments, which might have been prevented had the different stations realized that many of these experiments were capable of being generally applied. For instance, a hog feeding experiment at the Wisconsin station or a steer feeding experiment at the Iowa Experiment Station, or any of the older stations where they had the best equipment for carrying on these and the experiments are thoroughly studied out, should be generally accepted on the points investigated, but instead of this being so we find work of this kind being continually duplicated, at considerable expense. Of course, some of these questions have direct relation to the State conditions, and in such instances their duplication is justifiable. It is unfortunate, too, that there is not a more liberal spirit shown in accepting the results of other investigators. There is a tendency for each investigator to feel that because he has done the work it is so much better, so much more accurate than that which has been accomplished by some one else.

IRRELEVANT MATTER.

Another feature which shows itself constantly in bulletins of different kinds is the introduction of irrelevant matter. It would be a little dangerous to cite instances of this kind, because they are so frequent and we would likely have a great many feeling that we had them specially in view if such a reference were made. To be most effective a bulletin should devote its entire attention to the matter to be discussed, and not bring in anything outside of that, independent of the amount of information that the writer of it may have on the irrelevant point.

SUMMARIES.

To every bulletin there should be a clearly defined summary. Some that are issued show a vast amount of work and much carefulness in the arrangement of tables, but when a conclusion is sought for, it is not in evidence. In many cases this may be legitimate, because it is not possible to form an outside opinion on the work that has been done, but it does not prevent a summary being presented. This summary should be completely free from prejudice, and it may not be out of place to say right here that this is one of the things which the investigator finds hardest to free himself from, and yet it is a most important thing to do. An investigator may have advanced an opinion before his investigations have been made, and in such cases the tendency is very often for him to try and maintain that opinion by the work he does afterwards, though that work may teach something different.

BULLETINS SHOULD BE EDITED.

This work of issuing bulletins and the other press work connected with colleges is becoming so important that the modern institution should have an editor whose business it is to edit all the matter that goes from the station. This would mean bulletins that would teach their lessons better, especially for farmer readers, and this is the class which

HINTS FOR WOMEN

How to Secure a Perfect Complexion by Natural Means—An Easy Way to Beautify the Skin and Obtain a Good Color.

It is every woman's wish to be possessed of a clear and beautiful skin, but how few are thus fortunate. A pale and sallow complexion is far too common and a fresh, healthy color is so uncommon as to be the cause of favorable remark when seen anywhere. It is a matter of fact that the condition of the skin is an index to the health of the body. Therefore, to improve a bad complexion, the right way, and the only sure way, is to go back to the cause. In almost every case it will be found that the blood is out of order and needs building up. This was the case with Miss Gracie B. King, of No. 35 Russell street, Lewiston, Me.

"My color had left my face," she says, "and my health failed. I suffered from nervousness, dizziness, and loss of appetite; not enough to confine me to the bed but troublesome enough so as to interfere with my work. Oftentimes I experienced a faintness at the stomach which made me feel miserable.

"During the summer of 1900 a friend who had been troubled as I was, and who had been helped by Dr. Williams' Pink Pills for Pale People, recommended them to me. I began to take them at once and had not used up a box before I felt a decided change for the better in my condition. Now I do not like to be without them."

The disease from which Miss King suffered was anemia. It is characterized by a pallid complexion, pale lips, dull eyes, tongue and gums bloodless; shortness of breath on slight exertion—especially upon going upstairs; palpitation of the heart, feeling of impending death; weakness, loss of appetite and ambition; irregularity and pain in the natural functions of women.

The one remedy that has proved itself a specific for anemia is Dr. Williams' Pink Pills for Pale People. These pills, taken in increasing doses, will never fail to effect a cure if used persistently for a reasonable length of time. They are sold in boxes (never in bulk) at fifty cents a box or six boxes for two dollars and fifty cents, and may be had of all druggists or direct by mail from Dr. Williams Medicine Company, Schenectady, N. Y. Be sure to get the genuine; substitutes never cured anybody.

the correctly written bulletin may do the most for.

In addition to the above quoted observations it may be said that the field of original research in agricultural science has as yet been but sparingly occupied. The problems demanding solution are legion, and the opportunities for making a great name in the world are realized by but few.

But it ought to be at once and forever understood that the experiment stations are not for teaching what is already known, but are charged with finding out what needs to be known, with doing that which has not been done.

Farmers' Institutes.

The following dates and assignments from the agricultural college have been arranged for farmers' institutes:

December 5 and 6, Hackney; Professors Cottrell and Mayo.

December 5 and 6, Burrton, Mrs. Calvin and Professor Dickens.

December 6, Belmont, Professors Otis and Walters.

December 7, Turon; Professors Otis and Walters.

December 9, Hazelton; Professors Otis and Willard.

December 10, Attica; Professors Otis and Willard.

December 11, Harper, Professors Otis and Willard.

December 12, Anthony; Professors Otis and Willard.

December 13, Argonia; Professors Otis and Willard.

December 14, Milan; Professors Otis and Willard.

Don't forget to use a little Prickly Ash Bitters whenever the stomach or bowels are disordered. It quickly corrects such troubles and makes you feel bright and cheerful.

In writing advertisers mention Kansas Farmer.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

December 10 and 11, 1901—Armour-Funkhouser, Herefords, Kansas City.
 December 13, 1901—H. C. Duncan, Shorthorns, Kansas City.
 January 7, 1902—Tom Clark, Chicago, Herefords.
 January 14, 15, and 16, 1902—Cornish & Patten and others, Kansas City, Herefords. C. R. Thomas, Manager.
 January 22, 1902—E. E. Axline, Oak Grove, Mo., Poland-Chinas.
 January 28 and 29, 1902—Winn & Mastin, Kansas City, Poland-Chinas.
 January 28 to 31, 1902—Botham's Annual Criterion Sale at Kansas City.
 February 11, 12, and 13, 1902—J. F. Stodder, J. W. & J. C. Robison, and Snyder Bros., Wichita, Kans., Combination Sale.
 February 13, 1902—J. F. True & Son, Shorthorn cattle, Wichita, Kans.
 February 19 and 20, 1902—Breeders' Combination Sale, South Omaha, Herefords. C. R. Thomas, Manager.
 February 25-27, 1902—C. A. Stannard and others, at Kansas City, Mo., 200 Herefords.
 February 28 and March 1, 1902—Dispersion of Waver trees herd of Galloways, South Omaha, Neb.
 March 19, 1902—Dispersion Shorthorn Sale. Col. W. R. Nelson, Kansas City.
 March 20 and 21, 1902—Edward Paul, Dispersion Sale of Galloways at South Omaha.
 March 25-27, 1902—National Hereford Exchange, Chicago, Ill. (Botham Management.)
 April 16, 1902—W. O. Park, Atchison, Kans., Aberdeen-Angus.
 April 22-24, 1902—National Hereford Exchange, Kansas City, Mo. (Botham Management.)
 April 25 and 26, 1902—H. O. Tudor, Holton, Kans., Shorthorns.
 May 27-29, 1902—National Hereford Exchange, Omaha, Neb. (Botham Management.)
 June 24-26, 1902—National Hereford Exchange, Chicago, Ill. (Botham Management.)

Breeders at Urbana, Illinois.

A great meeting of stock-breeders was held recently at Urbana, Ill., under the auspices of the Illinois Live Stock Breeders' Association. In adopting its resolutions it said things worth printing and worth reading. Here are its resolutions:

Whereas, Farmers' sons and daughters must prepare to meet equal responsibilities of life with other people and

Whereas, They are entitled as individuals to equal enjoyment of the advantages of life, therefore be it

Resolved, By the Illinois Live Stock Breeders' Association that they are entitled to and ought to enjoy equal opportunities for both elementary and higher education, and

Whereas, From the nature of the case the conditions for establishing schools of high grade are less favorable in the country than with the denser population of villages and cities, and

Whereas, Without these schools the young people of the country must either grow up without the advantages of superior schools or else leave their homes to attend city schools at considerable expense and at an age when they ought to enjoy the influence of home surroundings, and

Whereas, The plan of establishing schools of high grade even in thinly populated country districts and of gathering the pupils each morning in regular conveyances, and returning them to their homes each night has long been tried and found to be not only entirely feasible in operation but less expensive to the community.

AGRICULTURE IN SCHOOLS.

Resolved, That the association heartily endorses and supports the present Superintendent of Public Instruction in his efforts for the centralization of the country schools, and

Whereas, Good judgment and experience both dictate that young people shall be educated in sympathy with their surroundings, and

Whereas, Agriculture and the affairs of rural life have been not only much neglected but often derided in our public schools, therefore be it further

Resolved, That it is the deliberate judgment and the earnest desire of this association that these schools should not only import superior instruction in the ordinary branches of learning but that they should also give such instruction in the elements of agriculture and maintain such attitude toward the affairs of rural life as shall tend to an accurate knowledge of the business of farming and a wholesome respect and love for country life.

Whereas, The General Assembly has appropriated \$250,000 for making an exhibit of the various industries of the State of Illinois at the St. Louis World's Fair in 1903 and

ASK AN APPROPRIATION.

Whereas, The leading industry of the State is the breeding and marketing of live stock, and

Whereas, The people represented in the General Assembly contemplated that liberal provision be made for a large and creditable exhibit of live stock at the St. Louis World's Fair, therefore be it

Resolved, That the Commission appointed to secure and display the resources of the State at said world's fair be requested to set apart a sum of not

less than \$50,000 for prizes for live stock exhibited by Illinois breeders in 1903 at St. Louis.

Resolved, That a committee of three members of this association be appointed to present this petition for said amount to the Illinois commission having charge of the State exhibit at the St. Louis World's Fair in 1903.

WILL BE PRINTED.

Whereas, The annual address of Hon. A. P. Grout, the president of this association, contains many valuable suggestions and important data of especial interest to all desirous of promoting the work of the college of agriculture, and,

Whereas, The information contained in said address is worthy of the widest publicity and should be published at an early date and given to the press, and all interested in the great work of the development of the usefulness of the college of agriculture and station, therefore be it

Resolved, That 1,000 copies of said address be printed in pamphlet form for early distribution.

Resolved, That the cordial and very suggestive and appropriate address of welcome by Professor Davenport, to this association, be published in said pamphlet together with the able and comprehensive response by Hon. O. J. Bailey.

WILL GET TOGETHER.

Whereas, The frequent interchange of experience and the opportunity for conference is a necessity to the breeders of live stock and the general farmer, and,

Whereas, The annual meetings of the Live Stock Breeders, the farmers' institutes, and the various agricultural organizations of the State serve a most excellent purpose in stimulating thought and the adoption of the best methods of conducting farming operations, and,

Whereas, The neighborhood farmers' club composed of 12 congenial and mutually interested families of farmers has proved to be the most effective agencies for the discussion of seasonable topics of especial interest to localities, and,

Whereas, Said neighborhood farmers' clubs serve a most valuable purpose in promoting social intercourse and the study of all questions of interest to each member of the farmer's family, therefore be it

Resolved, That the Illinois Live Stock Breeders' Association, most cordially and heartily recommend the early organization in the respective neighborhoods of our membership of farmers' clubs and that all matters pertaining to our live stock industry be given deserving prominence on the program of the monthly meetings of said clubs,

PRaise OFFICERS.

Whereas, The officers of the association have conducted the business of the organization during the past year for the best interests of all concerned, and,

Whereas, The earnest, able, and constant efforts of said officers have resulted in an abundant annual harvest of the best and most advanced thought on topics of especial interest to the breeders or improved stock and the student engaged in the study of animal husbandry, and,

Whereas, Practical and successful breeders and teachers have contributed liberally to the vast fund of practical and much needed information pertaining to the breeding, feeding, and marketing of live stock and animal products, therefore, be it

Resolved, That cordial and hearty vote of thanks be and is hereby extended by this convention to said officers and speakers for the very creditable and acceptable services rendered.

Resolved, That a full measure of our gratitude be and is hereby extended to the University of Illinois, for rooms provided for this meeting and the gracious hospitality extended that has resulted in a full measure of enjoyment and benefit to all in attendance.

ENDORSED THE COLLEGE.

A report endorsing the Illinois Agricultural College was unanimously adopted as follows:

"Your committee to whom was referred the matter of reporting upon the condition and wants of the College of Agriculture, University of Illinois, beg leave to report that we find an able, progressive, and deeply interested faculty in charge or an earnest, bright, ambitious, and very promising corps of students.

The great importance of employing teachers second to none in ability, advanced study, and successful experience in imparting special lines of instruction is so apparent and essential to success as to warrant the urgent request that the trustees sustain and improve upon high standard demanded in the qualifications of the members of the faculty of the College of Agriculture by the taxpayers of the State.

The committee recommend that this association appeal to the trustees of the University of Illinois, to appoint or retain only such instructors in the College of Agriculture, as may be able to demonstrate their ability to improve upon the best standards and to lead in the advanced lines of effort necessary to equip graduates for the successful prosecution of their life work.

The graduate from the College of Agriculture in the opinion of your committee should not only be thoroughly instructed in the technical line of studies pursued but have the practical experience incident to extended field work conducted by teachers intimately acquainted with the several lines of investigation.

In addition to the above requirements said graduates in the opinion of your committee should have the benefit of such an extended course of general reading as will give the broad culture and general information necessary to creditably fill any station in life.

In order to retain the best corps of teachers in the College of Agriculture, such liberal compensation should be provided as will ensure continued and more earnest effort so necessary to promote rapid development in the most advanced lines of agricultural instruction.

The best teachers, the best equipment, and the best class of graduates alone will meet the requirements of the promoters of the College of Agriculture, of the University of Illinois.

Some New Records.

The admiration of the man for the horse is dependent in no small degree upon the horse's ability to go. The fabulous prices paid for fast racers seem in no danger of declining in view of the new records made year by year by thoroughbreds. Several records have been made this season.

The record breaker of the year has been Cresceus. This all-conquering chestnut stallion reduced the world's trotting record first to 2:04 1/4 at Cleveland, and then to 2:02 1/4 at Columbus, Ohio. He reduced the race record to 2:03 1/4 at Brighton Beach, and his two heats there in 2:03 1/4 and 2:06 1/4 also constitute the fastest two-heat race ever trotted. His heat in 2:05 at Detroit is the fastest second heat in a race; his third heat in 2:05 at Brighton Beach the fastest third heat against time; his 2:09 1/4 at Kansas City is a new trotting record for a half-mile track, and his 2:12 at Toledo the record for a half-mile track to wagon. All told Cresceus now possesses no less than 12 "best on records" trotting list.

Peter Sterling, the Kentucky Futurity winner, deserves mention, for his second heat in that event, in 2:11 1/2, is the fastest ever trotted by a 3-year-old gelding. In his memorable race against Lord Derby, at Hartford, Borlma trotted the second heat in 2:07, which equaled the record for 5-year-old geldings, made by Lord Derby in 1900.

One of the most remarkable performances of the year, which should, but does not, through a technicality, stand as a record, was the mile trotted at

A NOTED PHYSICIAN

Makes an Important Statement of Interest to All Women.

"DEAR MRS. PINKHAM:—The honest, intelligent physician is above the 'School.' Whatever is best in each case should be used, no matter to what school a physician belongs. I, as a matter of conscience, can only pre-



DR. WANATA, of Lansing, Mich.

scribe the best, and as I know and have proven that there is nothing in Materia Medica which equals Lydia E. Pinkham's Vegetable Compound in severe cases of female disorders, I unhesitatingly prescribe it, and have never yet been sorry. I know of nothing better for ovarian troubles and for falling of the womb or ulcerations; it absolutely restores the affected parts to their normal condition quicker and better than anything else. I have known it to cure barrenness in women, who to-day are happy mothers of children, and while the medical profession looks down upon 'patents,' I have learned, instead, to look-up to the healing potion, by whatever name it be known. If my fellow physicians dared tell the truth, hundreds of them would voice my sentiments."—DR. WANATA, Lansing, Mich.

\$5000 forfeit if above testimonial is not genuine.

The record of Lydia E. Pinkham's Vegetable Compound cannot be equalled. Accept no substitute.

Mrs. Pinkham advises sick women free. Address Lynn, Mass.

Cleveland by John A. McKerron, to wagon, in 2:06 1/4, which is the best on record by a stallion to a four-wheeled vehicle.

The race record for trotters to wagon, amateur driver, placed at 2:10, by John A. McKerron, in 1900, was equaled in 1901 by The Monk, driven by his owner, Fred Guken, at Empire City Park, New York, in a second heat. Mabel Onward, owned by Mr. Billings and driven by Frank Jones, trotted a second heat at Memphis in 2:10 1/2, which is the record for mares in a race to wagon, with either amateur or professional driver.

The pacers made a great showing. Though Star Pointer's peerless 1:59 1/4 still stands unapproached, many minor marks went by the board. High water mark for this year is the 2:00 1/4 of Prince Alert at Memphis. This is the world's record for pacing geldings, supplanting the 2:01 1/2 of Robert J., made seven years ago. It is also the fastest second heat ever paced, and next to Star Pointer's 2:00 1/2 the fastest heat ever paced in a race. Prince Alert also paced a second heat in a race over a half mile track in 2:04 1/4 at Bethlehem,

FISTULA AND POLL EVIL

Fleming's Fistula and Poll Evil Cure is a new, scientific & certain remedy. NO COST IF IT FAILS. Write today for important circular No. 446 FLEMING BROS., Chemists, Union Stock Yards, Chicago.

Cured in 15 to 30 Days

Moore's Hog Remedy KEEPS HOGS CLEAN ON INSIDE AND OUTSIDE....



Kills lice, cures mange, removes worms, aids digestion, and prevents disease AT SMALL COST. Read what A. J. Lovejoy & Son, Roscoe, Ill., write:

GENTLEMEN:—

"We have used the Moore's Hog Remedy and Dipping Tank, purchased of you last spring, and are pleased to report that it does all that is claimed for it. We believe that there is more benefit derived from dipping hogs for their general health than by feeding medicine, and we heartily recommend the above to all breeders and feeders of hogs."

Moore's Hog Remedy is sold in gallon and half gallon sealed cans only—never in bulk. Do not accept cheap substitutes, said to be just as good. If your dealer cannot supply you we will ship direct from factory and by express prepaid, on receipt of price, \$2.50 per gallon—3 to 6 gallons, by freight prepaid, \$2.25 per gallon. Book "Care of Hogs" free. Call, or address

MOORE CHEMICAL & MFG. CO., 1501-1503 Genesee Street, Kansas City, Mo.

Pa., equaling the record made by John R. Gentry in 1900 at Lima, O.

Little Boy's performances were almost as sensational. At New York he paced a mile to wagon in 2:02. Mr. Jones soon after sold him to C. K. G. Billings, and at Memphis the latter drove him one mile in 2:01½ and another in 2:01½. The previous pacing record to wagon had been 2:03¼, by Bumps, and with amateur driver 2:03¾, by Coney, driven by Edwin Gaylord.

The record for pacing mares (2:04¼), made by Lady of the Manor, in 1899, was equaled by Mazette at Memphis, and at Cincinnati Edith W. paced three heats in 2:05¼, 2:05¼, 2:05¼, the fastest trio ever put in by a mare. During the season Mazette paced in 2:07¼ in a race over a half-mile track at Malone, N. Y., and Edith W. in the same time in an exhibition heat at Bourbon, Ind. The previous half-mile tract record for pacing mares was 2:08, Pearl C. at Muncie, Ind., in 1897. The record for pacing mares to wagon was reduced to 2:06½ at Memphis by Little Squaw. The record for pacing stallions in a race to wagon was reduced to 2:08½ by Hontas Crooke, also at Memphis.

One other pacing record was equaled, Coney winning a first heat in a race at Detroit in 2:02—the same notch where Star Pointer went in 1897.

Killing Fever Ticks by Machinery.

A Texas correspondent of the Breeders Gazette gives the following account of a preliminary trial of spraying to kill Texas fever ticks:

The Lewis spraying process for killing ticks on cattle was given a primary test on Ben Van Tuyl's ranch 10 miles south of this place last Thursday. The object of this test was to demonstrate the efficiency of the medicine and the general practicability of the method, and though the test was made with incomplete machinery and hastily provided attachments, it proved so far all that the originator, Dr. W. K. Lewis, Inspector for the Cattle Sanitary Board, has ever claimed for the method.

The test was made with a 1½ horse power Gould's gasoline engine and a Gould's triplex pump, the pump and engine being made stationary on a common 2-horse wagon. The medicine in liquid form, which is the same as that which has been so successfully used as a tick-killer though heretofore applied as a "dope," was pumped from an ordinary water-barrel through two lines of hose, at either end of which there was attached a spraying nozzle, the average pressure being about 160 pounds. The cattle one at a time were run into a branding chute. A man on each side of this chute applied the spray to every inch of the animal's body from its ears to its tail, especially treating the brisket, belly and between the fore and hind legs. In this way it took an average of 1 minute to treat each animal after entering the chute. About 20 cattle were treated Thursday evening, then turned into a pasture and in a few days they will be publicly examined to ascertain if all ticks are dead.

The test has demonstrated that the principle is correct in so far as applying the treatment is concerned, and if the medicine proves effective, of which there is no doubt, having already been thoroughly tested, the machinery and apparatus will then be perfected in detail. A chute especially designed for spraying will be constructed, having nozzles attached to the sides and bottom in such way as to reach every part of the animal. It will then only be necessary to drive the animal into the chute and turn on the pressure, and it is estimated that the spraying capacity of one machine will be not less than 1,500 cattle per day. D. H. B. Mitchell County, Texas.

A Bit of Memory.

The memory of a fellow worker is not often so well commemorated as in the following from the Armour-Funkhouser sale catalogue:

"The late Mr. Kirk B. Armour had so many friends who feel a deep sense of personal sorrow in his death that I know that I echo the thoughts of all who have ever come in contact with him, in the belief that as individuals, as Hereford breeders and as brothers in the great cattle fraternity, we have been favored as few in this world are favored, by the association and friendship of a nature so grand, of a man so lovable in all the characteristics, from the simple to the great, which combine to make a charming acquaintance, a wise counselor, an honorable competitor, a loyal friend and a just man.

"My personal association with him, from his earliest interest in the cattle breeding industry, is one of the fondest memories of my whole life, and I always think of him as the grandest man I have ever known. Every one that I met at the Kansas City cattle show seemed to be reminded doubly of him in the midst of scenes which they knew he thought of with great fondness. As the great parade was being made the last day, I thought of him, and the conviction came to me with great force that none of us had realized how

much he did to bring about possibilities for such shows, or how much he did to extend the use of the thoroughbred bull. Involuntarily I drifted back to eight years ago when all of us were wishing our herds were smaller, and wondering where we would find a market for the few bulls we produced. Then came Mr. Armour's advent as a breeder, and his world-wide statement as a packer, "I am for the betterment of beef, regardless of strain." Fortunately with his advent as a breeder came better times, but his example and his industry and advice had a very potent influence in the betterment of cattle, and our present great market for thoroughbred bulls. Few people know how many were his conversations with range men, how wide his correspondence with the cattle world generally, and always the advice, "buy good bulls, whether you buy Short-horns, Blacks, or Herefords." His heart was in the work, and he put into it the same tireless energy and absorbing interest which he gave to the packing business.

"He was indeed a friend in need, but great as his business influence was, I think all of us will miss his personality more. It was his custom to come to my house twice a year, once in the spring when the fields had put on a healthy coat of green, and again in the fall when the woods were at their highest color. He always chose the brightest days, and always drove the ten miles from Lathrop to get the smell of the woods and fields, as he said. Those days seemed the brighter for his coming. I don't think I ever knew any one who had a more absorbing love for all that is best and beautiful in nature, and he always seemed like a boy let out from school in his interest in everything pertaining to the farm and cattle. We looked forward to his visits and at home we always call an ideal day an Armour-day.

"In my business associations with him, the thought uppermost in his mind seemed to be that we should make a better offering every time we made a public sale, and he always tried to stimulate a little friendly rivalry between us, as to who could make the best offering. It was in that same spirit that we arranged for this sale, and I shall do everything in my power to make my offering worthy the memory of my friend.

"JAMES A. FUNUKHOUSER."

Gossip About Stock.

Please remember that the Armour-Funkhouser sale of Hereford cattle will be held at Kansas City next Tuesday and Wednesday, December 10th and 11th.

Snyder Brothers, of Winfield, Kans., sold to H. E. Silliman, of Cowley County, a fine boar sired by Ideal Corwin 21534 and out of Black Beauty 51104, a full brother of their prize-winning pig, Proud Corwin.

A choice load of Hereford heaves from South Dakota sold for 7 cents per pound on the Sioux City, Iowa, market last week, breaking all previous records of high priced sales at the stock yards at that place. The cattle averaged 1,683 pounds, and the average price was \$118 a head.

The Ash Grove Herd of Duroc-Jerseys and Poland-Chinas are enjoying good health, feasting on alfalfa hay, with shorts slops and a little dry wheat and corn added; so writes the proprietor, Mr. D. Trott, of Abilene, Kans. Mr. Trott has some fine animals for sale at right prices, and would like to hear from those desiring to purchase.

Kansas breeders in large numbers are at Chicago this week attending the International Live Stock Exposition and the annual meetings of the various national breeders' association. The entire live stock staff of the Kansas Farmer is now in Chicago preparing a complete report of the great stock show and the annual meetings. Tell your neighbors to subscribe so as to get next week's paper.

Manwaring Brothers, of Lawrence, Kans., have sold during the past two weeks, of their large English Berkshire swine, thoroughbred animals to breeders in Severance, Clay Center, Ottawa, Colony, Leonardville, and Randolph, all in Kansas. Kansas farmers are active in increasing their herds of swine, and the demand for pure-bred stock is stronger than ever before. Manwaring Brothers have 112 more on hand awaiting fortunate purchasers.

That progressive and first-class breeder of Poland-Chinas, just over the line in Missouri, Mr. J. R. Young, of Richards, has 10 head of desirable Poland-Chinas for sale, and in the special want column this week he has an announcement of 10 fancy spring boars by Missouri's Black Prince and out of prize-winning dams, which he offers, to quick buyers, at one-half price, in order to make room for fall pigs which he is getting ready for public sale in February 1902.

Dr. Whittier and Colonel Moore, of the Moore Chemical and Mfg. Co., of Kansas City, are conspicuous at the International at Chicago this week and both are in the storm center of an interested crowd of stockmen, their customers and would-be's from several States and Territories. Both of these men seem to have a community interest with cattle and swine men and are quite jubilant over the reception of their celebrated hog and cattle dips by stockmen.

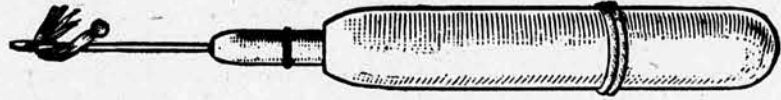
The Shenandoah horseman, M. L. Ayres, is not very much given to tooting his own horn, but notwithstanding, it is a fact that he was never better "hooked up" for the best class of trade than right now. The writer sees his horses frequently and knows well their value. About all that Mr. Ayres does in "blowing" is to say, "Tell them to come and see the horses." Whenever they come he sells to them. The horses can not be beat; they are fine big, square, black and dark gray, young Percherons, that men like to see. Don't fail to see Ayres' big stable full of Percherons, imported and home bred, at Shenandoah, Iowa.

The new Blacklegline Outfit furnished with the Pasteur Blackleg Vaccine in the cord form, or "Blacklegline" as it is called, has met with great success. This new Outfit only costs 50 cents, and renders vaccination cheaper, simpler and more effective than ever. "Blacklegline" is the Vaccine in the form of a cord which is saturated

"BLACKLEGLINE"

Pasteur Blackleg Vaccine Quite Ready for Use.

This is in the form of a cord impregnated with the vaccine. Each dose is separate and applied with a special needle. The dose is hitched on to a notch in the needle and then inserted under the skin at the shoulder. The needle is provided with a detachable handle. Vaccination with "Blacklegline" is as rapid and easy as taking a stitch. There is no dissolving, or mixing, or filtering a powder; no injecting or trouble in measuring doses; no expensive syringe outfit.



BLACKLEGLINE OUTFIT, SHOWING NEEDLE INSERTED IN HANDLE AND DOSE OF VACCINE ATTACHED READY FOR VACCINATING.

Prices: "Single Blacklegline" (for common stock): No. 1 (ten doses), \$1.50; No. 2 (twenty doses), \$2.50; No. 3 (fifty doses), \$6.00. "Double Blacklegline" (for choice stock) (first lymph and second lymph, applied at an interval of eight days), \$2.00 per packet of ten double doses. Blacklegline Outfit (handle and two needles), 50 cents.

PASTEUR VACCINE COMPANY,

Chicago, New York, Omaha, Kansas City, Ft. Worth, San Francisco.

with the Vaccine. Each dose is separate, which is a great convenience. The Outfit consists of a needle furnished with a detachable handle, and there is an extra needle in case of breakage. The dose of "Blacklegline" is inserted in a notch in a needle, and the operation of vaccinating is now as simple as taking a stitch. An illustration of the Outfit will be found in our advertising columns.

Not long since W. C. Moore, owner of the Sayda Polo Herd of Jerseys, received a notable Jersey bull, Financial Count, from Wm. Rockefeller's farm on the Hudson. Mr. Rockefeller bred this bull for his own use, but later secured the sire and Mr. Moore was fortunate in getting Financial Count. In this calf that comes to Kansas are combined the blood of two of the very best strains (the Finance and Fontaine families) on the Island. All of the grandams of the calf were 5-gallon cows, including not only the dam of the calf, but the 4 cows on down the line as well. On both sides the show-yard beauty, the great capacity, and the splendid front udders and perfectly placed teats combine to give what Jersey breeders call the "Ideal." In the future Mr. Moore intends to keep an American and an Island-bred bull, hoping to combine the good features of the two types. He is holding in reserve a young son of the great Bessie Lewis (32 pounds of butter in seven days) to take the place of Stoke Pogis Marigold (whose dam and sire's dam both made 25 pounds butter in seven days) in case an accident should ever take him. While East, after looking at most of the great herds and the great sires, Mr. Moore was more thoroughly convinced than ever that he had in Stoke Pogis Marigold a sire second to none in America. He will be used as long as he is fit for service.

Turn over to page 1051 and see advertisement of Sure Hatch Incubator.

Have You Hogs?

All our subscribers who own hogs should read Blooded Stock, Oxford, Pa. It is a first-class swine paper. Send stamp for sample.

At the Kansas City Market.

There is probably no live stock commission firm that does business at the Kansas City Stock Yards that can give you better service in the way of selling or purchasing stock than the Union Live Stock Commission Company. This company has a corps of competent men in all of the departments of the live stock trade. It furnishes this paper and market reports free upon application.

Directors: M. S. Peters, Jerry Simpson, F. E. Rowles, W. K. Greene, Henry O'Neill, Geo. W. Williams, L. C. Boyle.

The human eye should always have the most faithful attention. If affected in any manner, do not take the serious risk of consulting any doctor, but consult some successful specialist, like our advertiser, Dr. O. W. Coffey, of Des Moines, Iowa, who is personally known by the publishers of the Kansas Farmer as one of the most successful specialists of the eye and ear. Our readers who may have any affection of the eye or ear should not hesitate to write him in all confidence. To all such he will send free an illustrated book and advise you as to what should be done in your case. Don't fail to mention Kansas Farmer when you write him.

In writing advertisers mention Kansas Farmer.

The Lincoln Importing Horse Company's Office and Barn at Lincoln, Neb.



The Lincoln Importing Horse Company shows to Kansas Farmer readers this week, by way of illustration, a fine view of the company's barns, located at Lincoln, Neb., directly opposite the Nebraska State University Farm buildings, and easily reached by street car lines centering in the city. With this splendid equipment on the most slightly tract of land adjoining the capital city of Nebraska, the fine strings of imported Percheron and Shire stallions here to be seen may boast of being the best domiciled horses in the entire country. No barns are better ventilated nor better lighted, and none are more admirably partitioned off into roomy box stalls. So much for incidentals. The horses are the main proposition, and no man need fear disappointment in these. A fine string of English Shires are perhaps first to attract attention. These fine young horses were seen at the Nebraska State fair last September where they were admired by the thousands of visitors. The Shire type is here seen in its perfection. They are truly a fine set of big, square, thoroughly acclimated horses; horses that stand around a ton, horses that feel the best and look every inch kings of the stud, horses with the underpinning and the spirit to make them the finest set of flesh actors ever seen in the West. If ambitious horsemen

will go to see these fellows they will find them full better than any description can make them. Competent judges say they are unsurpassed in all that goes to make an English Shire the general favorite that he is for beauty of outline, flash action, and, more especially, for city draft purposes, to which end a large per cent of Western draft horses are now destined. But let it be understood that the Percherons are no secondary consideration at this establishment. On October 14th, Capt. J. H. Westcott arrived with their 1901 importation. In this importation Captain Westcott succeeded in getting together a lot of the tops, horses that command attention at any and all times, and in any company, by force of their size, fine conformation, excellent thrift, and splendid Percheron character. Manager A. L. Sullivan is in his happiest mood when he is showing these fine young horses to visitors. Go and see them. It is a standing rule with the Lincoln Importing Horse Company that every statement they make about their horses must stand good to the letter, otherwise they will pay traveling expenses of all visitors. When you reach Lincoln inquire for Sullivan's Barns—take University Place or Havelock street cars. See the advertisement, and mention Kansas Farmer when you write.

The Veterinarian.

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

Ergotism.—I have a cow 3 years old that I put on pasture about the first of May. She has had access at all times to good water, and had no chance to be grain foundered, but about three weeks ago she began getting stiff and is growing worse. There are others in the country affected in the same way. What is the cause, and what is the cure? F. A. DIXON.

Coyville, Kans.
Answer.—It is caused by ergot in the grass or feed which contracts the arteries. Change the feed to corn, bran, and alfalfa. Keep her in a good, warm place, as there is danger of her feet freezing, and will slough off if they do. Give her 1 dram of nux vomica and 3 ounces of brandy in a teacup of warm water twice a day.

Ring Bone.—We have a jack mule about 11 years old that frequently gets lame in his left front foot. There is a growth just above the hoof that looks like ring bone. If he is idle for some time it gets worse, and after he has been doing hard pulling the lameness is hardly noticeable. The growth does not seem to get any larger.

Where can I get an impregnator?
Cliffin, Kans. T. G. ULSH.
Answer.—Clipp off the hair from around the sore, and tie his head up so that he can not reach the part with his nose, and apply the following with the hand: One-half ounce of biniodide of mercury, and 1½ ounces hog's lard. Mix and apply every eight days.
 You can get an impregnator of Truax Green & Co., Chicago, Ills.

Cow that Slobbers.—I have an old cow that slobbers while chewing cud, so much so that quite a pool is formed during the night. It is worse on green feed than on dry. Has been so for two years. Will this retard fattening? What will stop it? L. B. METTLEN.
Brownell, Kans.

Answer.—It is probably caused by some irregularity of the teeth. Have them examined, and if they are properly fixed it will probably stop. It will interfere to a certain extent in fattening.

Out of Condition.—I have a bay mare 7 years old that is thin in flesh and is hide bound. She has a good appetite, but does not improve in condition. I feed her corn and cane hay, and she has the run of wheat pasture in the day time, and at night she is in the stable and groomed well. Has been in this condition for over a year. I had her mouth treated last spring by a veterinary dentist, but it did no good. Have given no treatment except some tobacco for worms. A SUBSCRIBER.
Cheney, Kans.

Answer.—Have a qualified veterinarian examine her teeth again carefully. Give her good alfalfa hay with crushed oats and bran if possible, also 3½ ounces nux vomica, 2 ounces dried sulphate of iron, 4 ounces hyposulphite of soda, 3 ounces powdered ginger. Mix and divide into 24 powders, and give 1 twice a day in dry feed.

Hemiplegia.—A few weeks ago I bought a mare 11 years old at a public auction for \$75. We drove her some after we got her home and also worked her a little to haul corn fodder. Having no further work for her until spring I decided to turn her into the pasture. After doing so I noticed she was in heat so I got her and put her back into the barn and only took her out to water (leading her about 10 rods) for a couple of days. I noticed one morning that something was wrong. She stood in the stall with her left front foot extended and her left hind foot back. I tried to back her, but she could not without trotting, and she drug her hind toe in the dirt. She can keep the flies off with that foot as well as with the other, but when she walks she drags it along, apparently swinging it in instead of out. There was swelling around the hock joint, but there is no swelling now except just above the ankle. She has been on corn fodder, Kaffir-corn hay, oat straw, and has not been given much grain. W. E. HODGINS.
Belleville, Kans.

Answer.—Give her 2 ounces of fluid extract of nux vomica, 6 ounces of Fowler's Solution, with sufficient water

to make 1 pint. Give 1 tablespoon in food 3 times a day at first and gradually increase the dose to 1½ tablespoons 3 times a day.

Texas Fever.—I live on land that has been pastured by Southern cattle. Can native cattle be pastured on the same land next spring and summer with safety? Will they get the Texas fever after the Southern cattle have been wintered here? D. B. HEACOCK.
Hydro, Okla.

Answer.—It will depend on the lay of the land in your locality, and the severity of the winter there so as to kill all the ticks, which cause the fever.

Facial Paralysis.—Please tell me what to do for my horse. He got his head caught in a hay-rack last August, and hurt the under side of his jaw, on the left side next to his throat. It affected his throat and the left side of his mouth. He does not seem to have the use of his lower lip. It drops down, on the left side, and his upper lip is drawn around to the right. There are times when he can not masticate his food, and it seems to hurt him to drink. He will take a big mouthful of feed, chew it up, and spit it out, and then try to eat it again. He seems to eat roughness all right. W. T. M.
Lincoln, Kans.

Answer.—The injury has probably caused facial paralysis, about where the nerves come through the bone close to the ear. Take 1 ounce Russian cantharides and 3 ounces hog's lard. Mix and boil, and apply with the hand on the cheek, next to the ear. Repeat this every ten days for three or four times.

Abortion.—One of my neighbors has a mare 7 years old that has slunk her colts about February 15 three years in succession. She was fed straw and corn fodder, and was running out. She was never sick. This year she was bred to my jack. Will you kindly let me know what is the matter with her? A SUBSCRIBER.

McPherson, Kans.
Answer.—The cause of this is probably some disease or a weakness of the womb. It might be from a number of causes, such as indigestion, a stone in the bladder, or a diseased ovary. It would be best to have her examined, and if no cause can be found, let her have a rest from breeding for a few years.

Publishers' Paragraphs.

The "Stickney Junior" power gasoline engine for farmers is a new advertisement which appears in this paper this week, by the Chas. A. Stickney Co., of St. Paul, Minn. This engine has proven a very popular success wherever it has been used. It sells for only \$110, which enables every farmer to have one. Send for free catalogue and mention Kansas Farmer.

We are in receipt of the Sure Hatch Incubator Company's Fifth Annual Catalogue. It is a book of some 166 pages, over 200 illustrations and contains a vast amount of poultry information, plans for poultry-houses, yards, etc., chapters on practical poultry raising and how to make money on a small investment etc. Look up the company's advertisement and write it, and mention that you saw its advertisement in this paper.

J. B. Armstrong & Sons, the big seed-corn growers at Shenandoah, Iowa, are again prepared to cater to the seed-corn trade in the best possible way. There was perhaps never a better turned object lesson than that held out to public view by the full yield of high grade corn from the Armstrong fields in this year of general disaster to the corn in nearly all sections of the corn belt country. From a certain field of white corn at Pleasant Valley Seed-corn Farm this year has been taken a crop of 1,000 bushels that averaged 80 bushels per acre, and that developed an unusually fine crop of well turned ears of splendid size in spite of the extremely untoward conditions of intense sun heat and absence of rainfall. Out of these extreme conditions, and by virtue of a persistent and skilled effort at cultivation through this period of intense heat, was developed as fine a crop of highly matured corn as ever grew on the farm. This field was under the care of J. B. Armstrong, Jr., who systematically set himself about the task of making good fields of corn out of what had been a magnificent prospect in the early season. It is putting it easy to say that he succeeded all along the line. This fine variety of corn now in question will hereafter be known under the significant name of White Salamander. But about these fine fields of corn later. With new equipment in the way of a big steam engine of power sufficient to move the whole plant, and with increased elevating capacity, increased area of skylights, etc., it may be said that the Armstrong Seed House is in full trim for handling the big trade that will come its way this season. They are hearing from old customers and new ones every day even now. They are ready to give out any information asked for and will book orders for whatever business may be given them now. The advertisement will begin about last of December.

Opportunities for Mechanics.

Digging wells is a most profitable business when the new shaft-sinking machines are used. Williams Brothers, Ithaca, N. Y., have published an illustrated catalogue of more than seventy kinds of well-digging machines, operated by either horse-power or steam. This catalogue will be sent free to any one contemplating this profitable business. These machines are so

LET US CONVINCE YOU



That the most valuable Wind Mill to purchase is not something new, but a mill that has been on the market for the past 15 years with constantly increasing sales.

THE NEW WOLCOTT WIND MILL

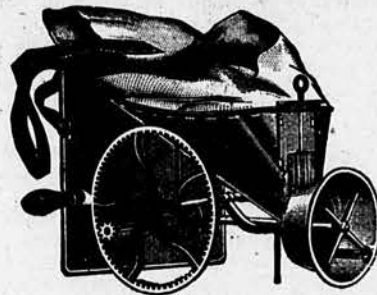
Combines Strength, Simplicity, and Durability.

Less working parts, easiest to erect, and requires less attention than any other Wind Mill on the market. Our stock includes wood wheel wind mills, Steel or Wood Towers, Pumps, Pipe, and Fittings, and our location and facilities enable us to furnish a first class line of Pine or Cypress stock and reservoir tanks at lower prices than any other manufacturer. Write for Catalog, and introductory wholesale prices and terms.

Wolcott Wind Mill Co.,
 Niagara & Waller Sts., Saginaw, W. S. Mich.

simple any person of ordinary mechanical skill can erect them, keep them in order, and operate them either in the softest soil or through solid rock. They are mounted for traveling from field to field, so that the owner's territory is only limited by his orders. Many industrious mechanics, tired of shopwork or long factory hours, have gone into this business with marked success. A competence is in sight for the man that takes hold of well-digging and pushes the business. Good water is in demand everywhere; the well digger will find a hearty welcome in any rural community, and get orders from the wealthier class of city residents.

For more than thirty years the Goodell Company of Antrim, N. H., has been manufacturing its famous Cahoon Broadcast Seeder, one of the best working, most efficient tools ever invented. Don't get the impression that this Seeder is a toy, or that it will not do the work thoroughly and rapidly. As a matter of fact



it spreads the seed much more smoothly and evenly than is possible by the most expert sower sowing by hand, and works so easily and rapid that one man can cover from 8 to 10 acres an hour, and put in more seed than 2 teams working with the ordinary seeders. We are informed that this company has at its factory the first Cahoon Seeder ever made, and the fact that after being used all these years it is as good as new, speaks volumes for its durability and high quality.

We suggest that our readers write for descriptive circulars, or ask their dealer to show them the Cahoon.

Coming Events.

State Improved Stock-Breeders' Association, twelfth annual meeting, Topeka, January 6-8, 1902; H. A. Heath, secretary, Topeka.

State Poultry Association Show, Topeka, January 6-11, 1902; George H. Gilles, secretary, 603 Kansas avenue, Topeka.
 Kansas State Board of Agriculture,

thirty-first annual meeting, Topeka, January 8-10, 1902; F. D. Coburn, secretary, Topeka.

ASPARAGUS.

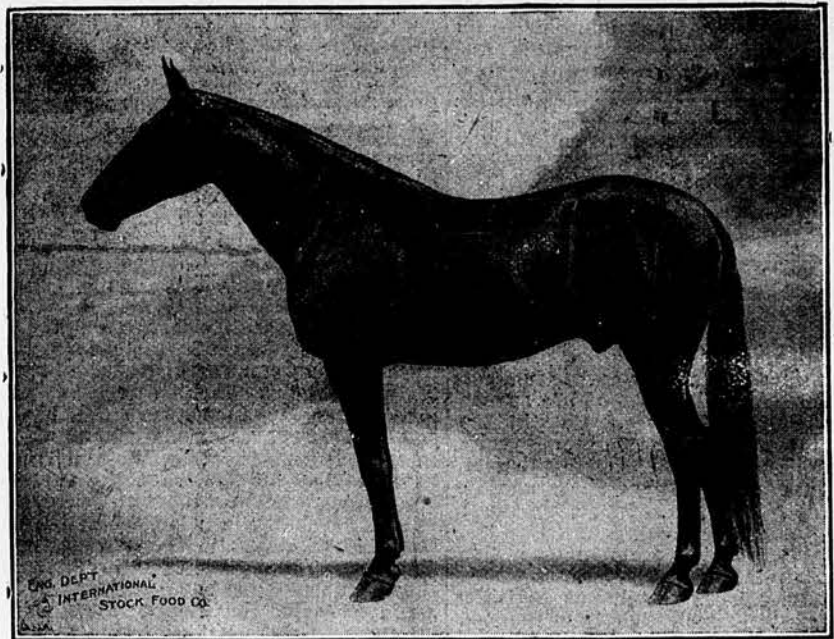
Its Culture for Home Use and for Market.

BY F. M. HEXAMER.

While most works on vegetable growing treat briefly on asparagus culture, this is the first book published in America which is exclusively devoted to this subject. All are agreed that there is no more delicious vegetable than properly grown and prepared asparagus. Yet it is but rarely found in our gardens, owing principally to the erroneous idea that its planting and after management are expensive and require special skill and knowledge. To disprove these fallacies, and to impart reliable and rational information on the improved and simplified modern methods of raising this peerless gem of the garden, is the principal object of this work. In successive chapters the author treats exhaustively on the saving of the seed, raising of the plants, selection and preparation of the soil, planting, cultivation, manuring, cutting, bunching, packing, marketing, canning, and drying, insect enemies, fungus diseases, and every requirement to successful asparagus culture, special emphasis being given to increase the importance of asparagus as a farm and money crop. As no garden is complete without an asparagus bed, so is no gardener's or farmer's library complete without this interesting and instructive book.

Handsomely illustrated, 5 by 7 inches, 170 pages, cloth. Price, postpaid, 50 cents. Orange Judd Company, 52 Lafayette Place, New York, N. Y.

In making up your Christmas presents remember that there is nothing more appropriate than a year's subscription to the KANSAS FARMER. In this connection notice our "Blocks of Two" proposition.



DIRECTUM, 2:05¼
THE CHAMPION 4-YEAR-OLD TROTTER OF THE WORLD.
ALSO CHAMPION TROTTER STALLION OF THE WORLD FOR SEVEN YEARS.

Directum, 2:05¼, IS WORLD-FAMOUS AS A HIGH-CLASS "DO OR DIE" race horse, and ALSO AS A SIRE OF EXTREME SPEED. Several of his yearling colts brought over \$2,000 each at public auction. One 3-year-old mare, Emma Winters, 2:14¼, brought \$8,000, at public auction. Directum, 2:05¼, is a young horse but several of his colts have shown 2:10 trotting speed and they are all born with plenty of speed. The family of Directum, 2:05¼, has been furnishing world champions for over one-third of a century. Commencing with the great Dexter, 2:17¼, Jay Eye See, 2:10, Phalias, 2:13¼, Nancy Hanks, 2:04, Direct, 2:05¼, etc., and then Directum, 2:05¼, the noblest Roman of them all. He held the world's stallion trotting record from 1893 to 1900 and was finally overtaken by a horse of his own blood, but who had two years more of careful training, being 6 years old, before he reached the mark set by Directum as a 4-year-old. If Directum had been "saved up a little" as a 4-year-old, he would have been very close to the two-minute mark as a 6-year-old. Directum was raced very hard and often as a 4-year-old and won 13 world's records at that age. The sterling qualities of the true race horse which Directum, 2:05¼, always exhibited made him the idol of every impartial horseman, and take him all in all, his equal has never been seen. Directum, 2:05¼, has just been purchased by International Stock Food Co., Minneapolis, Minn., U. S. A., for \$12,100.00, and will head their "International Stock Food Farm." They also own the trotting Stallion Buttonwood 2:17, sired by Nutwood, Dam by Mambrino Boy, and the trotting Stallion International King, sired by St. Vincent 2:13¼, Dam by Chimes, and the trotting Stallion International Prince, bred by Island Wilkes 2:13¼, Dam by Florida by Hambletonian 10.

International Stock Food Co. will send every reader of this Paper Free, Postage Prepaid, a complete history of the life and races of the great Directum 2:05¼, if you will write them and state how many horses you own or handle. They will also send you Free a fine large Lithograph of Directum in six brilliant colors, size 16 by 18 inches.

The Home Circle.

THE SNOW.

Great, feathery flakes like rose leaves,
Redolent with peace and love—
Tossed hither and yon they come to us
From the cloud-gardens up above;
Nodding farewell at last they rest
By the summer home of the dove.

A mantle of purity drops like a veil
Before the bare forest trees
Yet I know the kind fairies are quietly
working

Replacing the loss of the leaves.
With daintiest etching the frost-elves now
Remodel the house of the bees.

God-head of all that is good,
Grant us thought snowflakes divine
That will quietly drift o'er the bare forms
of life
Hiding the dust and the grime—
Bringing in quiet and peace,
Blotting out sorrow and crime.
—Elizabeth Druse.

MEN WHO HAVE HELPED THE FARMER.

Robert Koch.

(Born December 11, 1843.)

When doctors disagree about the effects of their medicaments, it is not always wise for a layman to venture a decided opinion. There is only partial agreement among the wise concerning the value of some of Dr. Koch's discoveries; there is a good deal of misunderstanding concerning some of the most important of them. And yet enough is known of their importance and of the great service done by Dr. Koch to make him and his work of profound interest to all intelligent people.

Dr. Herman M. Biggs of New York, himself one of the most competent bacteriologists of this country, in a recent magazine article has said that "Robert Koch is undoubtedly the most distinguished figure which has appeared in the medical world in the last two decades. The foundations of the great advances in bacteriology which have especially marked this period," continues Dr. Biggs, "were laid by the work of Pasteur, Lister, and others, previous to 1880; but since that date no one has contributed as much to its progress and to the general progress of scientific medicine as he. Not only have his discoveries in bacteriology been momentous, but his earlier work in improving the methods and technique of bacteriological investigation largely contributed to making possible the rapid development which has since occurred."

The particular thing which brought Dr. Koch into public notice, and which gives him title to an enduring fame as a benefactor of the human race, was his discovery in 1882 of the bacillus which causes consumption, or tuberculosis. This discovery had the effect of teaching the world that consumption is an infectious disease—a preventable disease—a disease that is hereditary to a very limited extent only, if at all. It furnished the means of fighting the commonest and most destructive of all diseases.

We do not realize the awfulness of the ravages of consumption. It has been shown that in the State of Massachusetts, during the forty years ending in 1895, there were 4,225 deaths from small-pox, 7,952 from measles, 34,485 from scarlet fever, 40,029 from typhoid fever, and 58,490 from croup and diphtheria—145,181 deaths from these five diseases. It is a record to make us realize in some measure the terrible loss of life caused by preventable diseases. But, in the same State during the same forty years, consumption claimed 209,115 victims. Yet we are less careful to guard against the worst of scourges than against small-pox!

While the deaths from consumption number nearly 10,000 a year in New York City, Dr. Biggs tells us that the death rate in that city has been reduced more than 35 per cent since the announcement of Koch's discovery—a discovery that taught the medical profession the true nature of tuberculosis. We all know now that it is preventable, and that, in the earlier stages, it is curable. But we have not learned to be careful.

Eight years after announcing the discovery of the tubercle bacillus, Dr. Koch read a paper describing tuberculin—the substance now almost universally used to test cattle suspected of having tuberculosis. The United States Department of Agriculture has made almost numberless tests of the value of tuberculin, the result being that all competent judges are agreed that it is the only certain proof of the presence of the tubercle bacillus in cattle. Its value to the stock interests of the country is almost beyond belief. It may yet appear to be of even greater value to men than to their animals.

Primarily, Dr. Koch's discoveries are

of less interest to farmers than to the people who live in cities; for consumption is more prevalent in the city than in the country. But the practical value of the tuberculin test appeals especially to farmers. By it they may be assured of the healthfulness of their herds. By it they may be warned of the presence of disease. If Dr. Koch's most recent announcement, that bovine tuberculosis is unlike and can not cause human tuberculosis shall prove well founded, the farmer will have another reason to count the great German investigator his friend and benefactor.

In 1884 Koch was decorated by Emperor William and given 100,000 marks by the German government in acknowledgment of his discovery of the bacillus which causes Asiatic cholera. Dr. Koch has made many other investigations concerning diseases of bacterial origin; but enough has been said to emphasize the great value of his achievements. He has saved more lives than a Napoleon could destroy. D. W. WORKING.
Denver, Col.

Advantages of Consolidation.

FRANK NELSON, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION.

By consolidation, all the children of the several districts, usually a whole township, can be brought together in one school building, giving the pupils the benefit of a graded school, and the inspiration that comes from numbers. A school of seven or eight pupils, having only one or two pupils in a class, is not calculated to give a boy or girl an incentive to do the best work. In a consolidated school, strong classes, thoroughly graded, can be formed, thus calling forth the best efforts of all the members. Longer recitation periods will give better opportunities for instruction.

By centralization there will be fewer and better teachers in the schools. Better salaries will be paid, and thus those who do teach would be required to make a thorough preparation in the way of high-school, college and normal training. There is no inducement to prepare thoroughly for teaching, with only the prospect of being able to earn \$25 or \$30 per month for a few months in the year. Consolidation will make teaching a profession. By centralization, all the pupils of the consolidated district will have equal advantages in the matter of higher education. With the central graded school, the high school is almost sure to be established, and thus the boys and girls of the farm will have an opportunity to secure a high-school training.

Under our present system, the pupils finish the common school course at from 14 to 15 years of age. The parents, ever if able to incur the expense of sending their children away to school, do not, in many cases, think it wise at this age to release the children from parental care, and from the restraining and helpful influences of home life. It thus usually happens that for a year or two the boy or girl is either kept from school altogether, or, if continuing in school, undertakes to take up some of the higher branches in the district school. But the difficulty is that the teacher is often unable to give proper instruction in those branches, or, if able, finds the time too fully occupied in giving the necessary instruction in the common branches. It is an established fact that, in the ungraded country school, where the teacher has all classes from the A B C up, with 25 or 30 recitations, but little time is found for instruction in the higher branches. For these reasons, the pupils doing advanced work find themselves poorly accommodated and their interest flags. Then, by the time they have reached an age when the parents are willing to allow them to leave the home, they have, in a large majority of cases, lost interest in the school work. But, even if at the age of 18 or 19 years they conclude to begin school work again, they find that they have, in some measure, lost the habit of study which they once had, and that they have two and in many cases three years of preparatory work ahead of them before



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The N. K. Fairbank Company, Chicago.

Fits every hand
Fit for any hand



they can take up the college course. This means six or seven years of school life away from home before a college course can be completed. Many become discouraged and thus fail to secure a higher education.

The health of the children is better preserved by this plan. With transportation to the central school, there are no wet feet and clothing, and consequent colds and attendant ills are largely avoided. Better schoolhouses, with better systems of heating and ventilation, are provided. Regularity and promptness of attendance are secured. The average daily attendance is increased, so that 25 to 35 per cent more schooling is secured, at a decrease in the cost.

By this method we solve, in a large degree, the problem of "how to keep the boy on the farm." We bring to the home life of the farm what the boy goes to the city to get. Such a school may also become the social and intellectual center of the community. With a library, music classes, debating club, and athletic associations, our boys and girls will not be so ready to leave the home for the uncertainties of city life. Then, again, through the unity thus established there will come a larger social life to the older members of the community. Lecture courses may be carried out, circulating libraries founded, and literary clubs formed. This enrichment and preservation of our rural life is one of the most important problems of our times.

Something Good to Eat.

The following recipes are comparatively new to me and may perhaps be useful to some one else.

SHIRRED EGGS.

Separate the whites and yolks of eggs. Add salt to the whites and beat stiff. Pour into a well buttered baking dish; then carefully place the unbroken yolks in the white froth and bake in quick oven, until the whites are set. They look appetizing and are palatable and easy to digest.

MOCK PINEAPPLE TAPIOCA.

Wash well 3/4 cup of pearl tapioca; cover with 1 cup of lukewarm water. Let stand one hour and drain off any remaining moisture. Beat yolks of 2 eggs with 1/2 cup of granulated sugar;

chop enough tart apples to make 3/4 of a cup. Mix with the eggs, sugar and tapioca; stir in 1 pint of sweet milk. Season with 1 teaspoon of orange extract or grated rind of orange. Turn into a buttered pudding dish and bake in slow oven until firm. Beat the whites of 2 eggs to a stiff froth, and add 2 table-spoons of sugar. Place this meringue on top of baked pudding with a spoon. Do not smooth it. Put back in oven until a delicate brown. Can be served hot or cold.

APPLES.

As apples are so plentiful this season, the following facts may be of interest:

Apples should form a part of at least one meal every day, and should constitute at least 1/3 of the canned fruit put up for winter use. Chemistry tells us that the apple is composed of vegetable fiber, albumen, sugar, gum, chlorophyll, mallic acid, gallic acid, lime, and water. German analysts tell us that the apple contains a larger amount of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted to renewing the essential nerve matter (lecithine) for the brain and spinal cord. Apples, if eaten freely, will also help to keep the liver in healthy action, and are equally beneficial for nervous dyspepsia. The mallic acid of apples, either raw or cooked, will neutralize any excess of chalky matter, engendered by eating too much meat. Ripe apples are the least fermentable of all fruits, possibly excepting bananas. We have the support of eminent medical authorities for stating that the most healthful way of cooking apples is to pare and core them and bake in a moderate oven, until reduced to half, their former bulk. Then add sugar and serve with cereal for breakfast or for dessert.

ENGLISHWOMAN.

It has been argued that modern methods of warfare would make wars of short duration. But the theory is not good in South Africa or the Philippines. —Exchange.

A coated tongue, foul breath, and clogged condition in the bowels suggests the use of Prickly Ash Bitters. It is just suited for such ailments.

Don't let your children acquire the Coffee Habit. Get out of the rut yourself! All doctors recommend COCOA & CHOCOLATE in preference to coffee. Why not get the Best?

UNEQUALLED FOR QUALITY, PURITY & FLAVOR.

The Young Folks.

JUST HUSTLE.

My boy, are you feeling discouraged and blue?
Are you thinking that there are no chances for you?
Does "failure" seem stamped upon all that you do?
Just hustle!

Do you toll in the office, the field or the shop?
Don't let each small obstacle tempt you to stop.
And every effort and ambition drop.
Just hustle!

The world never yet "owed a living" to man,
Each one has to get it the best that he can,
And the hustlers always lead, in the van.
Just hustle!

If you can not do what you would like best to do,
Or that which seems easy and pleasant to you,
Just pitch into something, and push it right through.
Just hustle!

This work-a-day world is a go-ahead place,
And laggard complainers are left in the chase;
Then forge to the front, and be first in the race.
Just hustle!

—Louisa J. Strong, in Exchange.

BARBARA FRIETCHIE.

A New Version of a Classic War Story.

On that clear morn of early fall,
When Lee marched over the mountain wall;
Over the mountain winding down,
Horse and foot into Middletown.
Forty flags with their silver stars,
Forty flags with their crimson bars,
Flapped in the morning wind; the sun
Of noon looked down and saw but one.

Almost every day, in some walk of life, heroic deeds are done which, if under auspicious circumstances or in connection with some national movement, would emblazon pages of the world's history; but, because of the absence of these glorifying circumstances, the deed soon ceases to be of even neighborhood comment. This is common; but seldom is it that a deed is done that electrifies a nation and the honor of it is conferred on other than the rightful persons. Still more uncommon is it when the rightful person will allow himself to be deprived of the honor due him without a protest. But such is the case of the heroine of Whittier's famous poem, "Barbara Frietchie." As the poem stands, it is almost pure fiction, having only the spirit and feeling of the deed, without any of the facts. Either Whittier was misinformed, or else he attributed the heroic act to an old woman to add a pathetic setting to the dramatic incident.

In truth, the heroine of the brave deed attributed to Dame Frietchie was a girl barely 17 years of age. Her name was Nannie Crouse, daughter of George Crouse, Sr., a baker in Middletown, Md. A modest, bashful village girl, without the slightest desire for public applause, did in a supreme moment face death in defying a detachment of Stonewall Jackson's fierce Louisiana "Tigers," who were clamoring for the flag. Her neighbors and friends stood spellbound by the act of the unassuming, unpretentious young person. But, in the turmoil of battle that soon swept around the village, the news of the brave defense of the country's flag traveled slowly, finally reaching Washington, with the result that the honor of it was bestowed on another for another town, and Miss Crouse, with that modesty which invariably accompanies true bravery, made no protest. A year later she became the wife of J. H. Bennett, and, while the reading world was being thrilled by the recounting of Barbara Frietchie's deed in Whittier's stirring war poem, the real heroine entered upon her duties of married life unaffected by the fact that the laurel wreath rested on another head.

Recently Mrs. Bennett was a guest of her brother, Mr. Chas. M. Crouse, a prominent merchant of Cedarville, Ohio, and one day, in speaking of his sister, he remarked that she was the real heroine of the poem. Said Mr. Crouse: "I do not know how they got Barbara Frietchie's name connected with the matter. She was a distant relative of our family and lived at Frederick, eight miles from Middletown, and at no time during the invasion of the Confederates was she able to leave her bed; in fact, she was on her death bed at the time. It is known that Mrs. Southworth, the novelist, related to Whittier what she knew of the incident, but he garbled the facts to suit his fancy, or else he did not get the straight of it at all. At any rate, I can vouch for the truth of the matter, though I was only a boy of 10 years. One is not likely to forget such scenes as those were," laughed Mr.

Crouse, "when one is half scared to death by them.

"My father was a red-hot Union man, and, of course, us children were demonstrative patriots; especially so was my sister Nan, though a girl of few words. Her demonstrations were acts. We had a neighbor, a hotel keeper, who was as strong a sympathizer for the Southern cause as we were for the North and he openly and dally taunted my sister whenever he saw her, particularly when she would fling to the breeze from the second-story window of our house her big flag.

"About this time Lee was marching northward, fresh from the victory at Chancellorville. Rumors of all kinds were current as to our fate if the rebels invaded Maryland, and for this reason alone we did not lay violent hands on our loud-talking neighbor, not knowing how soon the table would be turned on us. Finally Stonewall Jackson crossed into Maryland, and it soon became apparent that our neighbor was in communication with his scouts.

"Your rag will soon come down, now," he would call derisively to my sister, 'Jackson is near Frederick and will soon stop that foolishness.'

"But nothing daunted sister. Her flag floated to the breeze from its accustomed place just the same.

"One day on returning from the grist-mill with a boy friend we met Jackson and his staff. He asked me several questions concerning Middleton and the roads thereabouts. He was a very pleasant, kindly spoken man, and his personality affected me pleasantly. On leaving us he asked if there were any Yankees about.

"You'll find plenty of them if you go far enough," I replied boldly, though with considerable trepidation for the consequence.

"He smiled and rode away. The next day a detachment of cavalry galloped into town, no doubt at the instigation of our neighbor to secure the offending flag, which was floating as big as life, in the wind—but here," said Mr. Crouse, "I had better let some one else say the flattering things about my sister. A citizen of the town stood across the street during the raid and took in the scene, which he graphically described in an article read at an anniversary of the battle of South Mountain."

The following is an extract:

"This lonely Union flag hung from its staff over the residence of Mr. George Crouse, Sr., whose house and confectionery were located on the main street, near the center of Middletown. On the day in question a detachment of rebels came dashing into the town, and, galloping past Mr. Crouse's, the old flag met their sight.

"Halt!" the dust-brown ranks stood fast, and, quicker than I relate the incident, a dozen men had dismounted and were rushing upon the porch, when the bravest and most thrillingly dramatic scene I ever witnessed occurred. A beautiful young lady superbly formed, stepped from the doorway of her father's house and demanded of the rebels what they wanted there.

"That damned Yankee rag," said a big ruffian trooper, pointing derisively to 'Old Glory,' and moving toward the door as though he would enter the house and tear it from its staff. Anticipating the rebel's intention and taunting him with disloyalty to his country, Miss Crouse sprang past the man, ran up the stairway, hauled down the flag and draping it about her form, returned to the porch, looking the very impersonation of the Goddess of Liberty. Again the brutal rebel demanded 'the damned Yankee rag.'

"Again was his insolent demand refused with proud and loyal disdain. Approaching our heroine with drawn revolver, the barrel was pointed at her head, his companions all the while clamoring for the 'Yankee rag,' threatening, if their demand was again refused, to kill its fair defender.

"You may shoot me, but never will I willingly give up my country's flag into the hands of traitors," said Miss Crouse, without a tremor of fear, but with righteous wrath voiced in her very pose and in every syllable of her brave reply.

"Right here," said Mr. Crouse, "the accuracy of the eye-witness ends. He stated that the flag was torn from her. I stood just behind her and saw and heard all. The captain seemed a wild-mannered fellow, with not much control over some of his Louisiana Tigers, for he allowed one of his troopers to flourish a revolver near my sister's head. One of the soldiers must have been one of the true gentlemen of the South, for while the big ruffian was threatening to kill her, he said reassuringly: 'They dare not hurt you or touch the flag while you have it around you, but please save trouble and give it to the captain.'

Two Feet in Comfort

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"No doubt but for the presence of wiser heads some of the soldiers would have used force, for the man with the revolver reached over the captain's shoulder, pointing his weapon at sister with hate and viciousness in his expression. I cowered back against the wall in fright, feeling sure my sister would be killed.

"Finally, seeing odds were against her and to hold out longer was vain, she handed the beloved flag to the captain, who left the house, tied the flag about his horse's neck and departed.

"Back on a hill the captain of a body of Union horse saw these demonstrations, quietly made a detour and intercepted the triumphant rebels, capturing a portion of them, and, though the captain escaped, secured my sister's flag and returned it to her.

"A few weeks after this occurrence," concluded Mr. Crouse, "Miss Effie Titlow, my sister's chum, had occasion to visit in Washington, and a correspondent of Forney's (Philadelphia) Press interviewed her. She gave a graphic account of the event, but, knowing my sister's ideas against notoriety, refused to give the name of the heroine. He pleaded with her, but in vain. 'Then,' said he, 'if you'll not give the name of our heroine, I'll give her yours,' and so he did. This Press account created a stir in official circles at Washington, and Miss Titlow, the pseudonymous heroine, was offered a position in the Treasury Department. She accepted on advice of my sister. She retained the position a number of years, when she married and moved with her husband out West. Later she returned to Washington a widow, applied for her old position and got it, and there she is to-day, holding a very lucrative position on the strength of the supposition that she is the heroine of Whittier's poem.

"Mrs. Bennett's children have often remonstrated with their mother for allowing the deception, but she says she does not need a government position, and her old friend does.—Will M. Hundley, in Cincinnati Gazette.

Miss Goodwin's Success.

At the recent sale of fine stock in Kansas City, Colonel Woods, the auctioneer, paid the following compliment to Miss Lou Goodwin, of Kansas, who has achieved much success in breeding Hereford cattle:

"All lessons learned from actual life are valuable. Whenever I see a practical illustration on the farm I like to use it as an argument of the possibilities of cattle raising. Recently at the Hereford sale, breeders gave Miss Lou Goodwin a fair price for her offerings. I want to tell you, men and women, what Miss Goodwin has done. Seven or eight years ago she had the misfortune to lose her father, a Hereford breeder. Remember it makes no difference what the breed, you can do well with any. After her father's death his herd was sold at administrator's sale. One man here in Kansas bought the lot. Miss Goodwin's heart was almost broken to see the cattle her father had loved leave the place. In desperation she went to the purchaser and urged him to let her retain a sufficient number to go into breeding on her own account. He generously sold her \$1,500 worth on time, and that man was C. A. Stannard.

Promptly she began operations, and while I can not follow the details I can say that she has since made over \$6,000 and bought half a section of land and is breeding Herefords profitably here to-day. She did this with brain; girls are now endowed with much muscle. She directed the muscle of some one else. Yes, you may cheer. She deserves it. If I were not a married man I would go to Kansas and get me a wife. Imagine some young man going to Blue Rapids and laying his heart at the feet of Miss Goodwin. Her first question would be as to his occupation, and learning he was raising stock, ask him if he had sold his calves. An affirmative reply would prompt the question as to price. Suppose he said \$26.50, she would state that she got \$100 for hers, and if he played checkers it was time for him to move.

"What women have done women can do. What this particular woman has done, however, it would take a pretty smart man to duplicate."

Why Astronomy Destroys Ambition.

Lord Rosebery recently deprecated the study of astronomy "because it destroys ambition." His point is well illustrated in the current doings of the queer star that blazed out for us in the constellation Perseus in February, 1900. The favorite theory of the origin of this star is that two great dead or dying suns rushed together in the vast and populous, yet empty, infinities of space and were set on fire by the stupendous impact. The telescope now reveals strange perturbations there—enormous masses of molten matter moving about at a rate that can hardly be less than 50,000 miles a second.

No figures which the human mind can grasp would express the size of the bodies involved or the extent of this conflagration. And, most crushing of all to the imagination of man, this star is so far removed from our tiny niche in the universe that, although light travels more than 180,000 miles a second, the events of this drama which we are now observing occurred between 2,000 and 3,000 years ago.

As Lord Rosebery suggested, the study of such facts as these does not tend to give a man the sense of his own importance necessary to his acting upon the theory that his puny possibilities are worth developing.

Honey for Kansas, Missouri, and Oklahoma.

Two cans, 120 pounds net, amber \$7.80, whitest (more from alfalfa bloom) \$9.00, comb honey in one pound sections, 10 to 13 cents. Also small cans, all sizes. See price list. Nothing but genuine bees' honey. Reference, KANSAS FARMER CO. Address, Arkansas Valley Apiaries, Oliver Foster, Proprietor, Las Animas, Col.

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Last year's enrollment 729. \$130 pays for 48 week's board, tuition, room rent, and use of text-books. For FREE Illustrated Catalogue, address ALLEN MOORE, President, Box O, CHILLICOTHE, MO

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H. A. HEATH.....Advertising Manager

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Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

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

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Every advertiser will receive a copy of the paper free, during the publication of the advertisement.

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116 West Sixth Ave., Topeka, Kans.

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, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered both for one year for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

"The Capricornian," published at Rockhampton, Queensland, Australia, in its issue of October 26, and the "Agricultural Journal," of Cape Town, South Africa, of October 24, published by the Department of Agriculture, just at hand, each print entire the recent bulletin entitled "Kansas and Her Alfalfa," issued by Secretary Coburn. In the South African journal the word alfalfa is in each instance changed to "lucerne."

A correspondent inquires where he can get Kaffir-corn seed. No doubt there are many more who will want to plant this drouth resister if they can obtain the seed. There are many subscribers for the KANSAS FARMER who have nice seed which they would like to exchange for other subscriber's money. The want and for sale column of the KANSAS FARMER is the best possible medium of communication between farmers who want to sell and those who want to buy. A small sum invested in this column often brings large results. Try it.

The firm of Lewy & Goldschmidt, of Antwerp, Belgium, write to Secretary Coburn, of the State Board of Agriculture, that their attention has been especially called to Kansas, by a review in the "Cincinnati Price Current," of his little primer upon "Kansas and the Semi-Arid Section." They say: "You will no doubt be aware that large quantities of grain and also provisions are imported from the State of Kansas to our port, and copy of your booklet would interest us very much, as we handle good quantities of these products, acting as agents for American shippers."

IT PAYS TO GRIND HIGH PRICED FEED.

To grind or not to grind feed is a problem that has been propounded periodically for these many years. Whether it will or will not pay depends largely on the price of feed and on the grain to be fed. Properly ground and judiciously fed grain produces larger gains in proportion to the amount used if ground. When corn is worth, say 20 cents a bushel, it is probably cheaper to feed more of it than to have the expense of grinding. But when corn is

worth 50 to 70 cents a bushel the increased value on account of grinding well repays the cost.

Much wheat is being fed in Kansas and Oklahoma this season. Animals generally do not masticate wheat well enough to secure its full digestion. Kaffir-corn is also swallowed without proper mastication.

While prices of feed remain high and while the small grains are extensively used a good feed mill of one of the modern makes will doubtless prove a good investment.

THE KANSAS CITY STOCK YARDS CASE.

In 1897 the Kansas legislature enacted a law intended to reduce and regulate charges at the Kansas City Stock Yards.

On the day set for the law to take effect the company obeyed the law, but the next day two stockholders in the company—Charles V. Cotting and F. L. Higginson, both of New England—applied to Judge C. G. Foster, in the United States Circuit Court of Kansas, for an injunction. They asked that the company's officers in the West be restricted from injuring the value of company property by obeying the law. They also asked that L. C. Boyle, then attorney general of Kansas, be restrained from taking steps to enforce the act. It was Boyle's duty under the law to prosecute the Western officers of the company and send them to jail if they failed to obey the law.

Judge Foster issued a temporary restraining order and appointed George W. Clarke to be a special master to take testimony. The appeal to the courts by the Eastern stockholders was based on the contention that the law would confiscate their property if the State was allowed to enforce it.

After a long fight, in which it was shown that all the wealth accumulated by the stock yards company had been profits on an original investment of \$96,000, Clarke reported to Judge Foster that the rates fixed by the legislature were reasonable. Judge Foster followed this report with a decision that the State could properly enforce the rates. The United States Circuit Court was next appealed to and Judge Amos M. Thayer decided that Judge Foster was right. The company took the case to the Supreme Court, then reorganized as a Missouri corporation, and moved its cattle yards, except for quarantine, into Missouri. It handles hogs in Kansas yet.

THE SUPREME COURT'S DECISION.

The decision of the Supreme Court was given to the public November 25, 1901. It was written by Justice Brewer. The first point decided is that the legislature has a right to make reasonable regulations for services rendered by the Stock Yards Company. As to the extent to which the legislature may restrict charges the court says:

"As to parties engaged in performing a public service while the power to regulate has been sustained negatively, the court has held that the legislature may not prescribe rates which, if enforced, would amount to a confiscation of property. But it has not held affirmatively that the legislature may enforce rates which stop only this side of confiscation and leave the property in the hands and under the care of the owners without any remuneration for its use. It has declared that the present value of the property is the basis by which the test of reasonableness is to be determined, although the actual cost is to be considered, and that the value of the services rendered to each individual is also to be considered. It has also ruled that the determination of the legislature is to be presumed to be just and must be upheld unless it clearly appears to result in enforcing unreasonable and unjust rates."

The decision further says that the State's regulation of charges is not to be measured by the aggregate of profits, determined by the volume of business, but by the question whether any particular charge to an individual is, considering the service rendered, unreasonable or exacting.

The State took much care to show how great are the stock yards company's profits. The purpose was doubtless to make it apparent that the proposed reductions would still leave reasonable returns on the capital invested. The court states that in handling the case the State's attorneys made the amount of the aggregate earnings the pivotal fact. This is a broad intimation that the handling of the State's side of the case was defective.

REASONABLENESS OF THE CHARGES.

As to the reasonableness of the charges the decision says:

"It was found, however, that the charges made by the defendant were

no greater (and in many instances less) than those of any other stock yards in the country. Nothing is stated to outweigh the significance of that finding. While custom is not controlling, for there may be a custom on the part of all stock yards companies to make excessive charges, yet in the absence of testimony to the contrary a customary charge should be regarded as reasonable and rightful."

PENALTIES.

As the penalties for violation of the law the court finds the wording uncertain with chances that the law might be so construed as to impose penalties aggregating \$15,000,000 for a single day's violations. On this point the court continues:

"It is doubtless true that the State may impose penalties such as will tend to compel obedience to its mandates by all individuals or corporations, and if extreme and cumulative penalties are imposed only after there has been a final determination of the validity of the statute, the question would be very different from that here presented. But when the legislature, in an effort to prevent any inquiry of the validity of a particular statute, so burdens any challenge thereof in the courts that the party affected is necessarily constrained to submit rather than take the chances of the penalties imposed, then it becomes a serious question whether the party is not deprived of the equal protection of the laws."

DISCRIMINATION.

Another point against the law is found by the court to be its discrimination against the larger stock yards in making its regulations apply only to those stock yards within the State, "which, for the preceding twelve months, shall have had an average daily receipt of not less than 100 head of cattle, or 300 head of hogs, or 300 head of sheep."

After quoting with approval from a Kansas decision involving similar questions, the court says:

"If once the door is opened to the affirmance of the proposition that a State may regulate one who does much business, while not regulating another who does the same but less business, then all significance in the guarantee of the equal protection of the law is lost. The statute is not simply legislation which in its indirect results affect different individuals or corporations differently, nor with those in which a classification is based upon inherent differences in the character of the business, but in a positive and direct discrimination between persons engaged in the same class of business and based simply upon the quantity of business which each may do. If such legislation does not deny the equal protection of the laws, we are unable to perceive what legislation would. We think, therefore, that the principle of the decision of the Supreme Court of Kansas in State vs. Haun supra, is not only sound, but is controlling in this case, and that the statute must be held unconstitutional, as in conflict with the equal protection clause of the Fourteenth Amendment."

The decision was summed up by Judge Brewer as follows:

"The decree of the Circuit Court in this case is reversed with costs, and it is ordered that this cause be and the same is hereby remanded to the said Circuit Court with directions to enter a decree in favor of the plaintiffs and against the Kansas City Stock Yards Company and its officers in accord with the prayer of the bills, and also a decree dismissing the suit as to the attorney general of Kansas, without prejudice, to any further suit or action."

The entire court concurred in the decree, but not in all of Judge Brewer's reasoning. Justices Harlan, Gray, Brown, Shiras, White, and McKenna united in the following statement:

A DISSENTING STATEMENT.

"We assent to the judgment of the reversal so far as the merits of this case are concerned, upon the ground that the statute of Kansas in question is in violation of the Fourteenth Amendment to the Constitution of the United States, in that it applies only to the Kansas City Stock Yards Company and not to other companies or corporations engaged in like business in Kansas, and thereby denies to that company the equal protection of the laws. Upon the question whether the statute is unconstitutional upon the further ground that by the necessary operation it will deprive that company of its property without due process of law we deem it unnecessary to express an opinion."

Nearly every man can leave something behind him in the form of good works. If he owns land he may plant trees, for instance.

THE ANTI-HORSE THIEF ASSOCIATION.

During the last few years there has grown up in Kansas and the Indian Territory a great fraternity of determined men who are known as the State Order of the Anti-Horse Thief Association. This association now numbers over 300 subordinate orders and is allied in its objects to similar orders in other States and Territories. Its objects are set forth in the following preamble to its constitution: "In order to aid in the upholding of civil laws; to insure the safety of our people and the security of their property against loss by thieves, robbers, murderers, vagrants, tramps, incendiaries, and ALL violators of law; and to secure to us and our families the enjoyment of life, and the pursuit of happiness in the possession of our honest rewards of labor with equal and just rights to all we do proclaim the following constitution," etc.

That these objects are lived up to and that the association is doing a grand work is attested by the history of Southern Kansas and the Indian Territory during the last few years. The Indian Territory was once among the most notoriously lawless sections of our country. Now lawlessness is comparatively uncommon. Where it was once true that if the criminal could only reach the Indian country his safety was assured, it is now true that his presence there affords him no safety. The association has done and is doing a great work, but there is still more to be done. By reason of circumstances its greatest strength lies in the southern part of this State and the Indian Territory, but it is growing rapidly, and will soon be known by its good works in other parts of the State where its powerful influence is needed. And where, in this or any other State, is this influence not needed? Wherever crime exists; wherever criminals go; wherever men must fight and women must weep as the result of the presence and activity of other men and women who live to prey upon society, there is where this great fraternity has its proper field, and there it will be found at work as soon as its objects and methods become known.

Kansas never does anything by halves. Here is a fraternity already great, which not only captures and punishes criminals; protects its members and the community against their raids; cares for its sick or injured members and their families; provides for the widows and orphans of deceased members; buries the dead and is a true fraternity in every sense, but which by its growth and work, spreads a healthy public sentiment among the people and aids, more effectively, than any hired officers can do, in securing the peace, safety, and happiness of the people. And all these benefits and this protection is easily reached. Any 12 or more men of good standing in any community who are of legal age may apply for a charter to organize a subordinate order. Any man or woman interested may secure information in regard to the association by addressing State Secretary John W. Wall, Rural Route No. 2, Parsons, Kans. The officers of the State association for the ensuing year are, President, C. G. Horn, Welch, Ind. Ter.; vice president, N. J. Randall, Mineral, Kans.; secretary and treasurer, John W. Wall, Parsons, Kans.; Executive Committee, J. S. Wolf, Humboldt, Kans.; M. J. Warner, Welch, I. T.; and G. J. McCarty, Valleda, Kans. These gentlemen are in these important offices because of their efficiency and activity, and because of their interest in the order, and will gladly answer inquiries in regard to the association. It is to be hoped that its growth in the future will be as rapid as its efficiency has been great in the past.

THE SECOND INTERNATIONAL.

The second annual International Live Stock Exposition is being held in Chicago this week. The one held a year ago was considered the greatest event of the kind ever held, but KANSAS FARMER representatives who are present say that the present exhibition is greater than that of last year. Nearly 10,000 animals of the various breeds of cattle, swine, sheep, and horses are on exhibition, and the attendance is a manifest improvement over last year.

The agricultural colleges and experiment stations all over the country are well represented. The good work that they are doing is becoming more manifest every year, and, with proper encouragement, they are capable of doing the farming world a vast amount of good. After looking at some of the exhibits from these colleges, farmers will

naturally be curious to know how the animals were fed. If there is any one better way to feed stock than another farmers should know it.

The railroads have made a cheaper rate to the International Live Stock Exhibition than they did to the World's Fair or to the Pan-American Exposition. So far as the feeder and breeder of live stock is concerned, the International is more important than either of the other exhibitions.

The KANSAS FARMER next week will give a complete report of the great live stock events now in progress at Chicago, and it will be a copy that every one interested in stock raising will wish to preserve.

PUBLIC OFFICE NOT A PRIVATE SNAP.

There used to be a maxim which ran, "Public office is a private snap." This snap was considered as not to be enjoyed alone by the holder of the office, but to be shared among "friends" who had helped the holder to his position. A rude shock was given to the venal politician last week when President Roosevelt made public the following: "Governor Jenkins, of Oklahoma, is hereby removed because of his improper connection with a contract between the Territory and the Oklahoma Sanitarium Company. The decision is based purely upon his own written statements, and his oral explanations of them at the final hearing.

"One of the duties of the territorial governor is to enter into a contract with some persons or corporation for the keeping of the insane of the Territory. Governor Jenkins made such a contract with the Oklahoma Sanitarium Company, a corporation, the promoters of which reserved \$10,000 of its stock for the governor, and subject to his orders. In the governor's explanation of the affair, he says he told the promoters at the time they desired him to sanction the contract 'that it was an important contract; that I had some friends whom I would like to have interested in the company to whom I owed some political obligations, which I would not be able to pay by an appointment or anything of that kind.' The stock was delivered to a banker, subject to the governor's order, and was turned over to these friends whose political services the governor thus sought to reward.

"The extent of the favor by the governor to his friends is suggested by the fact that the only known sale of the stock since the contract was given out was at double the price paid for it. As performance of the contract was to be the sole business of the corporation, it is obvious either that the Territory was obliged to pay far more than the service was worth, or that its helpless wards were to have the enormous profits contemplated taken out of their keep.

"The governor's confessed relations to the matter disclose such an entire lack of appreciation of the high fiduciary nature of the duties of his office as to unfit him for their further discharge. A sound rule of public policy and morals forbids a public servant from seeking or accepting any personal benefit in a transaction wherein he has a public duty to perform.

"A chancellor would not for one moment retain a trustee who, in dealing for the trust, reserved an advantage to himself. The thought is not to be tolerated that the President can be less vigilant and exacting in the public's interest. THEODORE ROOSEVELT."

The astonishment of the professional politician at this and a long list of kindred acts by the President is not more profound among professional politicians than among people who have had hope deferred as to the purification of politics. It may now be considered as settled that during the administration of Theodore Roosevelt the political aspirant who has an unsavory record had better save himself the trouble of presenting his credentials and the embarrassment of humiliation.

It was a rather bitter drink for politicians of the baser sort when the venal gangs which have kept up a party organization in the South in order to hold the offices dispensed from Washington were turned down, and their political adversaries were put into places of responsibility and profit. But these were a long way off, and the act was excused as a supposed effort to attract to the President's party the stoniest and most respectable elements of the opposition in States where that opposition is strong. When, however, the President turned down a prominent member of his party in Kansas or Oklahoma for the mere fact that he used his position for the advantage of some "friends," to whom he was under political obligations, which he had no other

means of discharging, merely to enable these friends to share in a very fat contract in which the Territory was paymaster—when the President turns down "one of the boys" like that—well, "what are you going to do about it?"

Those who have observed even casually the course pursued by Theodore Roosevelt feel no misgivings as to his ability to stand all of the storm that Senators can raise. He is serving the present term of office now, and threats as to the future are unavailing. The people admire boldness, and, to use the small boy's expression, "Roosevelt always has his nerve with him."

Is it too much to hope that practical politics will be lifted soon into a respectability that will invite the services of the best elements of society?

FARMERS' WEEK AT TOPEKA.

Secretary Coburn, of the State Board of Agriculture, has been advised that an open rate of one and one-third fare for the round trip from all points in Kansas, and from Kansas City and St. Joseph, Mo., to Topeka, has been granted over all the lines of railroads in the State, for the various meetings which are scheduled to occur in Topeka the second week in January next, the more prominent being the thirty-first annual meeting of the State Board of Agriculture, January 8 to 10 inclusive, in Representative Hall; twelfth annual meeting of the Kansas Improved Stock Breeders' Association, January 6 to 8, in Representative Hall, and the State Poultry Show, which begins on the 6th and continues throughout the entire week, will be held in the Auditorium. These are popular, free-for-all meetings, and no one at all interested in the agricultural and live stock industries can afford to miss these great annual round-ups. As usual, programs of excellent and timely papers and addresses are already prepared or nearing completion, and the best known talent at home and abroad will be in attendance in response to special invitations, to discourse upon topics suitable to the occasion, and of which they are recognized authorities.

This will be distinctly "farmers' week," and from present indications many will journey to Topeka in order to join in the six days of intellectual feasting and festivity. Whosoever will may come, and that, too, at a cost of transportation lower than is usually available—a complimentary farmers' rate, so to speak. Tickets from all points in Kansas will be on sale January 4 to 11 inclusive, limited for return until the 13th.

ONTARIO'S CO-OPERATIVE EXPERIMENTS.

In Ontario the agricultural experiment station started a system of cooperative experimental work in 1886, with 12 experimenters. This year there were upwards of 3,000 Ontario farmers conducting the cooperative tests upon their own farms. The average number of experimenters each year for the four years ending with 1889 was 73; with 1893, 557; with 1897, 2,059; and with 1901, 3,157. The experiments were located in both New Ontario and Old Ontario, and on small farms as well as on large farms and the experimenters themselves comprised both men and women, highly educated and self-educated, old and young, married and single, rich and poor, who did the work for their own good and for the good of others.

Both the financial and the educational influences of this work throughout Ontario are great. The benefits are not confined to the experimenters themselves, but are shared by thousands of others who examine the growing crops, who attend the annual meetings, who read the annual reports, or who become familiar with the results through the columns of the public press, in the meetings of the farmers' institutes, and in various other ways.

Following is a schedule of the cooperative experiments of 1901, giving the number of those engaged in each experiment:

AGRICULTURE.

Grain Crops.

Table with 2 columns: Experiment description and number of experimenters. Includes rows for Oats, Barley, Spring Wheat, Buckwheat, Field Peas, Bug-proof Field Peas, Cow-peas and Japanese Beans, Husking Corn, Winter Wheat, and Root Crops (Mangolds, Sugar Beets, Swedish Turnips).

Table with 2 columns: Experiment description and number of experimenters. Includes rows for Kohl Rabi, Turnips, Parsnips, Carrots, Forage, Fodder, Silage and Hay Crops, three varieties of Millet, Sorghum, Grass Peas, Dwarf Essex Rape, Kale, three varieties of Clover, Sainfoin, Lucerne, and Burnet, and five varieties of Grasses.

Culinary Crops.

Table with 2 columns: Experiment description and number of experimenters. Includes rows for three varieties of Field Beans, three varieties of Sweet Corn, Fertilizer Experiments, Fertilizers with Corn, Fertilizers with Mangolds, and Miscellaneous Experiments.

Table with 2 columns: Experiment description and number of experimenters. Includes rows for Growing Potatoes on the level and in hills, Planting Potatoes the same day and five days after being cut, Planting Cut Potatoes which have and which have not been coated over with land plaster, and Planting Corn in rows and in squares.

HORTICULTURE.

Table with 2 columns: Experiment description and number of experimenters. Includes rows for four varieties of Strawberries, four varieties of Raspberries, four varieties of Black Raspberries, four varieties of Blackberries, four varieties of Currants, and four varieties of Gooseberries.

POULTRY.

Table with 2 columns: Experiment description and number of experimenters. Includes rows for Eggs, All the experimenters, included in the above statement, received the plants and seeds in the spring of 1901, and perennials farm crops are furnishing valuable reports this year.

Next week there is to be a meeting of those engaged in this union work. The meeting will be held at the Ontario Agricultural College, Guelph, Canada.

Industrial Commission Report.

The industrial commission has made public its review of evidence taken before the commission on the subjects of agriculture and agricultural labor. Among other subjects discussed is that of agricultural depression, of which the commission speaks as follows:

The cause most often assigned for the depression of agriculture in the Eastern States is the increased production due to the opening of Western lands in advance of the natural demands, especially through the agency of liberal land laws and grants of land in aid of railroad construction.

The competition of the West has been rendered especially severe by the policy of the railroads in making freight rates relatively low for long distances.

Thus truck farming has largely superseded cereal growing along the Atlantic coast, but farmers in the north Atlantic States now complain of the severe competition of the States farther south in this industry, and much the same may be said of fruit growing.

Even so perishable a commodity as milk is transported much longer distances than formerly since the introduction of refrigerator cars.

Another cause which several witnesses assign for the unsatisfactory condition of agriculture in some parts of the country is the conservatism of the farmers, their lack of quick adjustment to changed conditions, and lack of effective business planning and management.

Farmers, as a class, have not kept up with the times, but have raised the same crops year after year, without regard to supply and demand.

This undue conservatism and lack of managing ability among farmers is especially emphasized with reference to the southern States, and is given as an explanation of the too exclusive attention to cotton production prevailing there.

Another cause assigned for agricultural depression in the South is the scarcity of money, the difficulty of borrowing on real estate securities and the consequent high rates of interest.

It seems to be possible, however, to borrow money in the South at somewhat lower rates of interest than formerly. The decline in the price of cotton is of course an important element in the depression of agriculture in the South.

Against the charge that farmers are unduly conservative is put the counter charge that they turn from one crop to another without sufficient regard to the suitability of the climate and soil, or to the conditions of the market.

Rural Free Delivery of Mail Likely to Be Made Universal.

In his annual report referring to the extension of rural free delivery, which he heartily approves, the Postmaster General says:

"On an average there are 125 families on a route. Under the old system they traveled from 2 to 4 miles in going to the postoffice. If the cost in time and

other factors be reckoned at 10 cents a day for each family, it is clearly a moderate estimate. That made an aggregate of \$12.50 a day. The government can deliver the mail at the doors of all for \$2. Why shouldn't it do so and save them the larger burden? Extend the calculation to the whole country. There are about 4,000,000 families dependent on the rural service. The aggregate cost to them of going to the postoffice reaches an enormous sum. The government can carry the postoffice to them for a fraction of the amount. Under such circumstances the claim to the service becomes irresistible. It is the business of the government to deliver the mails as far as practicable. The apprehended obstacles to rural delivery have largely vanished with actual experience, and the manifest advantages, now clearly shown, urge the full development of the policy.

"Even the fear that the ultimate cost of this service would so far exceed the return as to make it a heavy national burden is sensibly dissipated by the results of the experimental trial. It is demonstrated that the establishment of rural delivery is invariably followed by a large increase of postal receipts; on the other hand, it permits a material retrenchment through the discontinuance of star routes and small postoffices; and the combined effect of the augmented revenue and the considerable saving brings the net cost of the delivery system to proportions which may be regarded without apprehension. The saving during the last fiscal year on star routes thus superseded was \$173,404.41, and on postoffices discontinued it was \$120,221.43. The two together amount to one-sixth of the entire appropriation for this service."

PRIZE GARDENING.

How to Derive Profit, Pleasure, and Health from the Garden.

COMPILED BY G. BURNAP FISKE.

Five thousand gardeners all over America kept a daily record of the methods and results for a whole season, and reported thereon fully in competition for many and large prizes. They represented all grades, from the small amateur to the professional market gardener. This unique book summarizes the most useful of all this experience. Each man or woman has definite ideas, and is testing them by successful garden practice. The very difference in the conditions and methods constitutes the particular value of the chapters, since readers everywhere will find that some at least of the descriptions are particularly adapted to their needs. Most important of all, every line is from actual experience. The result is a mine and treasure-house of garden practice. Careful editing has put this mass of experience into available, useful, and fascinating form. The chapters tell the story of the contest, describe the grand prize gardener's methods, gardening for profit, good farm gardens, the home acre, town and city gardens, experimental gardening, methods under glass, success with specialties, prize flowers and fruits, lessons from winners, success in town or city, fertilized gardens, gardening by women, boys and girls, irrigation, secrets.

Illustrated with many charts, sketches, etc., from original photos, 323 pages, 5x7 inches, bound in cloth. Price, \$1, postpaid. Orange Judd Company, 52 Lafayette Place, New York, N. Y.

I am in favor of an amendment to the interstate commerce law in the interest of the flour-milling industry and the Kansas wheat producer. I have felt for a long time that the agricultural interests of the country have too little attention along broad lines. A Congressman's quota of garden seeds is large enough. I am of the opinion that the farmers desire better recognition, and ought to have something more tangible. Among the bills I propose to introduce will be an amendment to the interstate commerce act permitting railroads to make half-fare rates to old soldiers.—Congressman J. D. Bowersock.

The Old Men and Women Do Bless Him.

Thousands of people come or send every year to Dr. Bye for his Balm Oil to cure them of cancer or other malignant diseases. Out of this number a great many very old people whose ages range from seventy to one hundred years on account of distance and infirmities of age, they send for home treatment. A free book is sent telling what they say of the treatment. Address Dr. W. O. Bye, Drawer 1111, Kansas City, Mo. (If not afflicted, cut this out and send to some suffering one.)

Horticulture.

Cranberry Culture.

Possibly some of the fruit growers of Kansas who possess irrigation facilities could find profit in producing cranberries. The following account of the production of this popular fruit, from the Newark, N. J., News will prove interesting:

Three hundred thousand bushels is New Jersey's contribution to the cranberry crop of the United States for 1901. There are 3 bushels to a barrel, and the grower will give thanks for his harvest this year at the rate of \$5 a barrel.

Although the crop is a large one, aggregating 1,000,000 bushels the country over, the housewife has paid, and will pay, from 5 to 10 cents a quart; more often the latter figure, according to the price the market man or grocer considers to fit the occasion. The total value of this year's cranberry crop from the producer's standpoint is \$1,700,000. It will cost the consumer \$3,000,000.

The new crop of berries began to drift into the market early in September, the first installment being, as usual, from the Cape Cod country. In October, Jersey berries were marketed, closely followed by the Long Island product. From the first it was evident that the crop was going to be far greater than that of 1900, when it was 569,000 bushels, and so it proved. The cranberry is a Thanksgiving joy for rich and poor, and it was eaten this year as never before.

Theoretically the millions of people who like cranberries know where they come from, of the growing and all. In reality not five persons in a hundred know how the berries grow, and the majority of those who do know live in the vicinity of the bogs.

REQUIRES LARGE CAPITAL.

Cranberry growing is an enterprise that requires considerable capital, and the cranberry vine, from which the greater part of the crop comes, is carefully cultivated. It costs from \$300 to \$500 an acre to prepare a cranberry bog or marsh and carry it to a point of profitable productiveness. Sometimes a salt marsh is selected, but often abandoned millponds are secured, because the bottoms of these prove to be by far the best of all bogs.

From 5 to 10 inches of clean, sharp sand is spread over the peaty earth in either marsh or bog, and the uprights, or cranberry shoots, are either placed therein in rows 14 inches apart, after very nearly the same plan as used in the case of cuttings from house plants, or else cut in short pieces and scattered over the sand. The young shoots come up through the sand as thick as wheat, making an excellent growth, and the whole surface is soon matted with them. This mode requires more vines than the others, but yields a crop sooner than by planting in any other way. The hardness of the cranberry vine or bush is shown by the radical success of this primitive mode of planting, for the uprights take root almost immediately. Soon after planting the uprights send out "runners," which in turn take root. In three years' time the vines come into bearing, and in five years, if it has received proper attention, gives a liberal yield.

Cranberry bogs require a plentiful supply of water, and to provide this the grower follows a system of irrigation. Ditches are excavated through the bogs, and from these, 100 to 300 feet apart, laterals, or cross ditches, are constructed, in which the water runs from 6 to 12 inches deep. The flow of water is regulated by a gate, and the different sections of the bog are separated by dikes.

FROST THE CRANBERRY'S ENEMY.

The dikes are essential features of the bog, because by their aid the flooding process is accomplished. Frost is the cranberry's enemy, and, singularly, water is the only protection for the berries. Thus, when a grower believes a frosty night is at hand, he floods those sections of the bog where the fruit remains ungathered, letting the water in until its level is from 18 to 24 inches over the tops of the vines. With the coming of the sun the water is drained off, and in a short time the ground is dry enough for the pickers to work. After the crop is gathered, in fact from the first of October until the last of March, the bog is under water.

The cranberry vine blossoms in June, and it is its appearance at this stage of growth that gave the berry its name. Just before expanding into perfect flower the stem, calyx and petals resemble the neck, head, and bill of a crane. Hence the name "craneberry," which usage has shortened into cranberry.

In September the cranberry harvest

begins, although October may be, more properly, called the harvest month. When the section of the bog where the picking is to start is selected, it is divided into rows, the boundary lines being marked by stout twine, running the entire length of the section. These rows vary in width from 2 to 3 feet. A row is assigned to a picker, who must thoroughly strip the vines therein before he is allowed to move to another row.

The method of removing the berries from the vines is simple and expeditious. The picker places his fingers, slightly spread apart, beneath the vine or bush, close to the ground, a quick upward movement, and his hands have stripped the vine of its fruit. The berries are dropped into a pan by the picker's side. When this pan is filled it is emptied into a pail holding $\frac{1}{2}$ of a bushel, the contents of these pails, in turn, being placed in crates. The crates are taken to the storehouse, where the berries are put through a winnowing machine, which removes the dirt and leaves collected by the harvest. Following this the berries are crated or barreled, and made ready for shipment.

WAGES OF THE PICKERS.

The pickers average from 7 to 20 pails a day, the number being regulated by individual skill. The average price paid is 12 cents a pail. A picker may be of almost any age, and it is no unusual sight to see whole families at work in the bogs during the comparatively short season of picking. The pickers are generally farmer folk of the neighborhood, who take this method of adding to the year's income.

Coincident with the opening of the picking season, early in September, the new crop of berries begins to appear in the market. Few persons, dealers say, are able to distinguish the old from the new. The newcomers are worth about \$5 a barrel to the producer, but by the time they reach the consumer the price is likely to be 10 cents a quart, although if the supply be plentiful, the price is occasionally not more than 5 cents a quart.

These pioneer berries come from Cape Cod. It is here that cranberry cultivation was inaugurated at the beginning of the last century. Cape Cod furnishes a large proportion of the best berries and about $\frac{2}{3}$ of the total crop of New England. Next in volume of productiveness comes New Jersey. Part of the State's crop is made up of wild cranberries. These are sometimes picked before they have begun to color, then spread on the ground and exposed to the sun for six weeks. It is claimed that in this way a deeper color is secured.

Following New Jersey comes New York berries, most of which are grown on Long Island. These, as a whole, are particularly good berries, large in size, and, for that reason, attractive. The cranberry is the one fruit whose quality is held second to its appearance.

CRANBERRIES FOR EUROPE.

There are cranberry bogs in Wisconsin, Michigan, Minnesota, Iowa, Indiana, and northern Ohio, and the times of harvest and marketing are about the same as in the East. The Western berry seldom finds its way East, for the home demand is as great as the supply. For this reason the Eastern berry often finds its way well toward and sometimes beyond the Mississippi. Generally it is of better quality, for the proportion of Western berries gathered from wild vines is large.

Every year cranberries are shipped to Europe, and statistics show a steady increase of exportation. It is only natural that this increase should occur, because the American cranberry is superior to the European.

England receives most of its cranberries from Norway and Sweden, but they are not nearly as good as the American product. Perhaps poor quality has caused the cranberry to lack in popularity abroad. Certain it is that nowhere is this berry so popular as in the United States, where the quantity consumed is larger than the rest of the world uses.

Pruning Grape-vines.

The time usually recommended for this work is soon after the leaves fall in October. Most farmers are busy husking corn in November and do not find time for jobs until later on. Any warm spell in the winter will do, though if put off too long the work is apt to be entirely neglected. The vines are apt to break if handled when frozen and on no account should they be cut after the sap has begun to flow in the spring, for the sap will run from cut ends, which would have healed if cut when dormant.

The directions given for pruning grape-vines in such standard works as

Fuller and Hussman are bewilderingly complicated to the average person, giving the impression that it is an occult and difficult art. It is really simple enough, though requiring care, judgment, and experience. The renewal, or fan system, is one of the best. Three or four new canes are grown each year from the crown or base of the vine. These are pinched back when 3 to 5 feet high, causing them to throw out laterals or side branches. These are shortened to 2 or 3 buds in the fall. The next year more new canes are grown in the same way, the ones that bear being cut out in the fall. In this way the entire vine is renewed each year. A grape-vine pruned in the ordinary way may be gradually changed to the renewal system by cutting off one or more of the old vines near the crown. This will cause new canes to spring up and the next year the remaining old vines may be cut out.

The ordinary farmer doesn't care to give his vines the requisite attention to follow any particular system, thinking he does well if he gives them any sort of pruning once a year. Whether grape-vines are given much or little pruning, it is necessary to understand something of their structure and habit of growth in order to secure best results. The first thing to bear in mind is the fact that all fruit is borne on wood that grew the previous year. In order to keep the vines the same size as much old wood must be cut out each year as is left of new wood. A knowledge of these facts greatly simplifies the work and renders it easy to keep the vines well in hand. Most vines have too much bearing wood and as this increases the vitality of the vine decreases. So many bunches of fruit set that the roots can not supply moisture and nourishment enough to make them large and fine.

Examine a cane or lateral of this year's growth and at the end of each joint or section a bud will be found on one side of the cane. Just below this bud there is a scar, where a leaf has been detached. On the opposite side of the cane there is usually a tendril or has been a bunch of fruit. New canes will grow from the buds next year, producing fruit, leaves, tendrils, and buds, same as did the canes from which they sprang did this year. The first bud, or one nearest the base of the new cane, is the strongest and most valuable for fruiting purposes. Three or four buds are enough for each lateral, so the rest of the cane is cut off. A dozen of these stubs is enough for one vine and half as many is plenty for a young or weak vine. One must use one's best judgment in deciding how many fruiting stubs to leave and which ones. Aim to have them as evenly distributed as possible over the framework of the vine, keeping the bearing wood as low down as possible, as the tendency is for the most growth to be at the end of the vine. Prune systematically and regularly once each year.

O. H. BARNHILL.

Shenandoah, Iowa.

A Gracious Response.

Count Fersen, Marie Antoinette's devoted servant, tells a pretty story which shows the charm words can have to deeds. It was when the royal family of France had been turned back at Varennes in their vain effort to escape—turned back towards Paris, where the mob even then was clamoring for their lives. They stopped to rest at the house of Mme. de Lagny, a royalist, who did all she could for their comfort. Madame waited at the table herself, serving the king and queen with swift and silent zeal. The poor queen in the midst of her despair noticed what had been done for her and hers. "Where is the mistress of the house?" said she. "I should like to see her and to thank her." "I was the mistress of the house," responded Mms. de Lagny, simply, "until your majesty entered it." Surely the word which beautified the service! An English woman would have left it unspoken.

Deafness Can Not Be Cured

by local applications, as they can not reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

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The Poultry Yard.

Heat, Air, and Moisture in Artificial Incubation.

Three things, heat, air, and moisture, are necessary to the germination or growth of any seed in the vegetable kingdom, or incubation, or growth of any seed or egg in the animal kingdom.

HEAT.

The first named, or heat, is the easiest condition of the 3 to understand and control.

The medical world agree that 98° Fahrenheit is blood heat and scientific experimenters practically agree that 4½° above blood heat, or 102½° or 103° surrounding practically all domestic fowls' eggs, is incubating temperature. When a hen lays out her clutch of eggs she becomes broody and simultaneously the heat in the lower part of her abdomen increases to what might be called an incubating fever, producing a temperature in the nest of 102½° or 103°.

Then if we gradually bring the temperature of our incubators up to 102½° or 103° and steadily hold it there it would seem that we had applied heat properly in the incubation of eggs, and any temperature above that except for a short time, say twelve hours at the last end of the hatch, we believe to be detrimental to a good hatch.

We know that in nature a hen leaves her nest for food, drink, and exercise; she also rises and stands over her eggs and rearranges them with her beak. All these exposes to fresh air, some half dozen to a dozen times a day, allows the eggs to cool a little, and also allows the impure air that has gathered in the nest to all or partially pass off, so it appears that a little cooling and exposure to fresh air is beneficial to a good hatch.

VENTILATION.

The quantity of fresh air necessary to pass through an incubator is more difficult to understand than the heat question. The writer is of the opinion that there can not be too much pure, fresh air caused to pass through an incubator when drafts and currents are kept at a minimum and the air is either kept at the right humidity or caused to pass in such a way that it does not absorb the moisture or water from the egg too rapidly, as he has never yet heard of any person being hurt by the use of too much of the ethereal fluid called air.

MOISTURE.

During incubation the air cell in an egg increases in size until often an egg has lost from 10 to 20 per cent of its original weight. Therefore the question of the proper evaporation of the contents of an egg or the watery part of it during artificial incubation is an exceedingly tough problem to solve. If the humidity of the air and ventilation harmonize the moisture problem is settled. If the air is too dry moisture is needed, or less ventilation. If the air is too wet, more ventilation or less moisture is needed. It is plainly evident that if too little evaporation or shrinkage of the contents of the egg takes place during the incubation period, the chick is so large and tight in the shell on the twentieth day that even if it pips, as it often does, it can not move or turn in the shell and pip the hole already made any larger, and therefore it remains as fast as if it was in a vice and soon dies, which it might as well do, for if it could get out in such a watery, plump, weak condition it would bother around a day or two and die anyway. This can be easily proven by picking the shells off from a few chicks of this kind and watching them afterwards.

On the other hand, it is just as plain to be seen and understood that if the contents of the egg is dried down too much while incubating there is too much substance gone that should be in the chick when it emerges from the shell, and therefore it is also too weak to stand the rough and tumble of a life in this world, and it also dies. Under the hen this drying down seems to be timed much better than in the incubator, as there is a much smaller per cent of the chicks that die in the shell, seemingly matured or full grown, than there is in the incubator.

These conditions commenced to stare the writer in the face when he began using incubators, and after 1 or 2 dozen hatches he came to the conclusion that holding an egg between ourselves and a lighted lamp in a dark room or floating it in the water, the two common methods, to ascertain when the shrinkage was right, was wholly unreliable. In

the case of the lamp the air cell may be either concave or convex, high around the edge or low around the edge, and as you look at it the line showing size of the air cell will be at the highest point of matter below the cell. In the case of floating, the air cell is always larger than the part of the egg shown above the water, which you can easily determine by floating an egg in dirty or inky water until the shell is colored a little, then holding it between you and a lighted lamp in a dark room.

Even if these processes were reliable, I have failed so far to find two persons in looking at an egg towards a lamp or floating it who would agree in their estimate (for it is only an estimate), as to whether the cell was right or wrong in size, and I am at a loss to know how a novice is going to know when the air cell in his eggs are right if he never looked at an egg while incubating before in his life. He does not know. Some happen to hit it just right on account of the moisture of their cellar or some application of moisture they have hit upon accidentally, and then they stick to that plan in that cellar or room and get good results, but when they move to another cellar or room their luck is all gone; others experiment and experiment on the air cell, and never get a good hatch, and throw the incubators away in disgust. The difficulty was to know when shrinkage was right.

The writer has been over all this ground with varied results and after two years of experimenting, weighing about 2,000 eggs, one at a time, each 4 times, while incubating under hens in various places in order to learn what the normal shrinkage was under natural conditions under the hen, and after learning this, finally invented

TRESTER'S MOISTURE INDICATOR.

Taking a duck egg as a standard and dividing it into 100 points and knowing what the proper evaporation under the hen should be the operator can easily tell from day to day whether they are shrinking properly or not and regulate it by adding moisture or ventilation.

It is a spring balance scale made delicate enough to show by weight what the egg loses each day while incubating, and to give his friends the benefit of his work and make all matters clear so far as he has gone, he herewith submits a variety of the experiments he made.

Each egg was numbered on the little end and weighed 4 times, marking the weight on the shell under the number each time it was weighed. The same record was also kept in a book. But so long as the eggs from various hens and various breeds are mixed up the shrinkage will be uneven, and hatches not the best that might be had otherwise.

In my experimenting two things were necessary to learn, first, how much does an egg shrink under natural incubation; second, when does the shrinkage take place, first, second, or third week. To prove this I divided the incubation time into 3 periods of six days each so that the last weighing would be done before pipping began, and the average of my experiments shows that the shrinkage is practically the same each and every day of incubation whether the eggs were fertile or unfertile.

The eggs I used were principally Barred Plymouth Rock eggs gathered promiscuously from 200 to 300 hens, and the weight of each egg and general average of each lot is given.

These weighing records are too extensive for a periodical and are therefore put in pamphlet form.

A partial description and account of my experiments will be mailed free if

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Roup.

EDITOR KANSAS FARMER:—Please give a cure for roup in fowls.
MISS LUCILE BROWN.
Hamilton County.

Roup in fowls is a bad cold in the head and is characterized by bleary eyes and swollen head. It is the grippe, and, like that ailment in the human being, is hard to handle. The causes of roup are the same as causes of a cold in mankind and may be due to any one of several conditions which are present, the most potent of them being perhaps, a damp, draughty hen house. Causes of this class which produce roup are all preventable and are all due to poor care or neglect.

There seems, however, to be occasional outbreaks of roup which are not traceable to any such cause and to be epidemic and the result of atmospheric conditions. When roup is present, however, it is absolutely necessary to begin treatment by removing the cause. If this can not be done, then the fowls must be removed to warm, dry quarters where they are protected against dampness, and especially against draughts in cold and wet weather.

Preventive measures are always best. Take care of the birds. Keep them warm, dry, and comfortable. Feed well, but judiciously, and give clean, fresh water daily.

Remember that cleanliness is important. One of the simplest remedies for roup that we have seen recommended is lime water. First separate the sick fowls from the well ones, then thoroughly cleanse the quarters, using plenty of whitewash and lime sprinkled about. Then put a gallon of fresh, strong lime in a jar and pour over it enough water to cover it 5 or 6 inches. Let this stand three or four hours, and dip off carefully, and give to the fowls, allowing them no other drink until after they are well. During sickness feed them corn-meal or Kaffir-corn-meal mush made up with this same lime water which must be strong enough to turn the corn-meal yellow. This is cheap and seems very effective.

Another writer is very successful by administering Mustang Liniment according to directions on the bottle. In case of badly diseased heads he bathes the head in strong alum water, and, in the event the swellings should break, then bathe the head in strong soap suds to which a few drops of carbolic acid have been added.

Remember that prevention is the best cure.

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A. H. DUFF, Larned, Kansas.

Grain Markets.

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

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

Markets to 2 p. m., Tuesday, December 3, 1901.

Markets closed firm in all the center exchanges of the country, as follows: Chicago.—No. 2 red wheat, 77½-78c; No. 2 hard wheat, 75-75½c; No. 2 corn, 63-63½c; No. 2 oats, 46-46½c.

Kansas City.—No. 2 red wheat, 76-77c; No. 2 hard wheat, 73c; No. 3 hard wheat, 71½-72c; No. 2 corn, 67-67½c; No. 3 corn, 66-66½c; No. 2 oats, 46c.

Kansas City closed very firm on account smallness of receipts, only 29 cars to-day.

Market Letter.

BY F. W. FRASIUS, OF THE FARMERS' CO-OPERATIVE GRAIN AND LIVE STOCK ASSOCIATION.

December 2, 1901.

In spite of the continued bearish statistical news—increased stocks of wheat reported from every quarter—the price of wheat has not only been well maintained during the last week, but a substantial advance has been scored. Strong efforts have been made by the great elevator interest of the Northwest to break prices but without results, notwithstanding the farmers of the Northwest with their tremendous wheat deliveries have aided in this effort—unconsciously perhaps—to break prices. Now, to any observer this condition, at present existing, if studied, must have been patent for some time; the general situation, high prices and scarcity of all other food stuffs, the short crops abroad, in importing as well as exporting countries, the financial condition of the country, the amount of wheat fed on farms, in fact all conditions have tended to create higher prices, and the only argument for lower prices have been accumulations of public stocks, in America or the visible supply, which is now 52,395,000 bushels and increased 3,484,000 bushels this week. The European public stocks, according to Bradstreet, have also increased. In the Southwest receipts are very low and hardly sufficient to supply the local mills of this territory. Exports are again on the increase and were 5,117,478 bushels last week, compared with only 2,498,000 bushels for the corresponding week last year, but the aggregate primary receipts, as proven by the increase in the visible, are still very large. Argentine shipments to Europe are very low at present, hardly amounting to one-tenth of these shipments a year ago. Exports of wheat and flour since July 1, however, have broken all former records and for the twenty-two weeks amount to 128,761,000 bushels, compared with 77,899,000 bushels for the corresponding time a year ago. A new demand has sprung up lately for our surplus. I have reference to the demand for wheat from our sister republic, Mexico. Most of this demand will be supplied from the Pacific Coast. In view of all of this I can not refrain from encouraging our friends to hold on to their wheat. Indeed they will remember that I have advised this course for some time and have the extreme satisfaction of knowing that wheat has advanced nearly 10 cents since I began to feel bullish on wheat, and since I advised our friends to hold. I could give many more reasons why I believe wheat will sell higher. For instance, "Broomhall," the acknowledged highest authority on crop conditions in Europe, has this to say: "The world's production of the five leading cereals, wheat, corn, rye, barley, and oats, amount to only 9,144,000,000 bushels, against an average production during the past ten years of 10,184,000,000 bushels, a shortage of over 1,000,000,000 bushels of all kinds of grain. Add to this the shortage in other products, especially potatoes, and it seems to me the most conservative farmer can not help but see higher prices. The condition of the growing wheat too is causing some anxiety, it being very dry in many places of the Southwest. It seems to me our farmer friends ought to take advantage of these conditions.

The Grain Trust at Its Tricks.

The prospects of the Farmers' Co-operative Grain and Live Stock Association of Kansas were never brighter than to-day. Every day adds new strength and vigor. Our friends are increasing steadily and never before has the cause had so many earnest investigators as it has at this time. Investigation of the

object and purpose convinces and adds other working members.

While our people have been loyal and true as a general rule, I desire to point out errors that have been made in other States and believe that our people, when they understand the methods used by the trust to wreck farm organizations in other States, will profit by the mistakes others have made and avoid their damaging tendencies.

Therefore I desire to call attention to the methods used by the grain trust in Minnesota and the Dakotas to demoralize the farmers' associations which were organized in those States to relieve the farmers from the extortion practiced upon them by the trust. When the trust became so oppressive the farmers organized local shipping associations and more than 140 elevators were built by them.

This movement had the desired effect and forced the trust to pay all the grain was worth. The trust met this condition of affairs by actually paying more than the grain was worth for a short period of time. By this method they succeeded in frustrating the farmers and laid a plan for the purpose of disorganizing the farmers and driving them out of business. This in many cases they succeeded in doing. They actually paid more for grain for a short time than the market would justify. The farmers sold to them, gave them their patronage and very soon the farmers' elevators were being conducted at a loss. This created dissatisfaction among them and the rest of the work was easy for the trust.

The farmers walked into the trap laid for them by the trust, and caused the failure of their own elevator companies. They were too near-sighted to see the result of their own actions. This being the case it is almost impossible to reorganize them and the trust is now reaping a rich harvest by charging the farmers exorbitant margins for handling their grain and transacting their business.

The farm organizations and the farmers themselves divided their business in such a way that independent dealers and commission men were forced into the trust. Had the farmers and independent dealers used ordinary business tact they would have selected one firm, or better still, organized a company of their own, given them their entire patronage, and paid a small penalty when they sold to others. Had they done this, they would have been in the field to-day, strong and independent of the trust.

But as it is they are now at the mercy of the grain trust and are forced to sell at whatever price the trust offers. They did not stand together, they did not sell together, they did not practice any discipline, nor did they use good business judgment. If farmers and independent dealers follow the same course in Kansas they will end in the same way. If they do not work together and sell together, they will not last long, and the Kansas farmers will then be in the same position as the Minnesota and the Dakota farmers and will pay dearly for their stupidity and folly.

To illustrate this proposition we will take 40 shipping associations that are shipping, say 2 cars each per week. If all ship to one firm or company, that would make 80 cars a week for that firm to handle and that would give them prestige in the grain trade and would also enable them to fight for your interest. On the other hand, if you divide your business with ten firms they would each get 8 cars per week, and would not be enabled to assist your cause—in fact they would have to go to the wall and would be forced to join the combination against you.

It is impossible for commission firms to stand out and act independently of the trust. The contest lies squarely with the farmers' organization against the combine. Independent, unorganized methods must succumb to the inevitable; must give way to intelligent organization and concentrated action.

The trust, organized as it is, notwithstanding all the injustice it has perpetrated against the farmers, will win as against the farmers and independent dealers if they are not organized. We want to give you fair warning that without a firm, solid organization of intelligent farmers there is no hope for the defeat of the trust methods that are now in control of a large part of the grain business.

A year ago there was not a grain firm in Kansas City that advertised for the farmers' consignments. It would have been suicidal in a business way for them to have done so. But now, since the Farmers' Co-operative Grain and Live Stock Association has been organized and stands ready to transact the business for farmers, independent dealers, and scoop-shovel men, the combine commission men who work as the trust

The Farmers' Co-operative Grain and ...Live Stock Association...

Will handle your grain, hay, and feed on commission. If you appreciate honest work, good treatment, and prompt returns, consign your grain to us. We want the consignment of all co-operation associations, independent dealers, scoop shovel men, and farmers. Correspondence solicited. Address all communications to

JAMES BUTLER, Secretary, Room 14, Office Block, Topeka, Kansas

dictates, are soliciting your consignments for the express purpose of dividing your business, weakening our organization, destroying our influence, defeating the purpose of our association, and causing the entire ruin of the farmers' movement.

To give your business to competitors simply because you can do as well will wipe out all independent dealers from the field in the near future and place you in a helpless condition. The same tactics are being used by the trust of this State at this time that were used in Minnesota, and some of the co-operative associations and nearly all of the independent dealers are blindly following the course outlined for them by the trust.

It ought to be evident to all that this is an age where organization succeeds and those who do not organize suffer. It is necessary to meet the grain trust organization by an organization of the producers of the grain; otherwise the grain trust will succeed here as elsewhere. We must meet organization with organization. If you are led away by some commission firm and give them your patronage, you weaken the farmers' movement just that much and you are doing just what the trust magnates want you to do.

If they can keep the business of the farmers' organizations divided, disintegration is sure to follow and the trust is the winner. Remember that the Farmers' Co-operative Grain and Live Stock Association is your association. Its welfare is your welfare, its people are your people, and its ultimate success is your success. Determine this day whom you will serve. Inasmuch as you can not serve God and mammon, neither can you serve your interest and send your grain to members of the grain trust.

Even if you should apparently at this time get back from them a few pennies where they have in the past taken dollars from you, the result of your selling to the trust at this time will result as disastrously to your own and your neighbors welfare as it did to the farmers of the Northwest who fell into just such a trap as the grain trust has so skillfully set for the farmers of the State of Kansas.

Will you walk into this trap willingly, knowing the results that are sure to follow such an action, or will you assist those who are at this time striving to break the yoke of the oppressor? I believe the people of Kansas are too intelligent to be caught in a second-hand trap after fair warning.

To the Jack and Mule Men of the United States.

We are approaching another World's Fair.

At the suggestion of the management of the World's Fair at St. Louis in 1903, the Live Stock Breeders of America, who have formed stud books for their various breeds, held meetings in St. Louis, Mo., on August 30, and October 12, 1901; and at these meetings a committee was appointed, representing the various breeds of registered animals as well as those not registered.

For this general committee, and executive committee consisting of 12 was appointed to formulate plans for the show of the live stock, and classify the different breeds of stock, and make classes for each breed, and report to the committee.

The undersigned was placed on this committee, over his protest, and was put in charge of the jack and mule department.

And it now behooves us all to put our shoulders to the wheel and make this the grandest and most magnificent show ever had or seen in any age.

This industry is yet in its infancy, and if we are to reap the harvest that is due us, we must spare no pains in getting the best stock in the country, and get it in the best shape, and let everybody take something to this fair. Don't stand back and say that there will be plenty there without mine, but take yours and swell the number until

we have an exhibition of 500 jacks and 1,000 mules.

The American army mule is attracting the entire world, and no nation now will think of going to war without first seeing the outlook for the purchase of this animal.

He seems to be indispensable in times of war as well as in time of peace.

Some one will say, "Aren't you commencing too soon?" No! The jack and mule men are said to be slow to start, slow to travel, and it is said they get there after the feast is over.

The classes will be arranged so that all sections can be represented, from the 12½ hand pack mule to the 17 hand drafter.

Special attention will be drawn to the army mule, and all his classes will be represented, and every quartermaster, and purchasing agent of every government on the globe, who can be reached, will be notified, and invited to attend and inspect this display of army mules.

Think of these figures! Ten million dollars have been left in the United States lately by European governments for army mules, Great Britain taking the largest number.

And now the papers inform us that 1,000 carloads are being shipped from the city of Fort Worth in the State of Texas for the use of the British government in her wars.

Kansas City, St. Louis, New Orleans, and a number of other places, have shipped their thousands, until the mule is becoming an item of great export trade in the Union.

Don't be afraid to breed them. There will be more demands than you will raise.

Fact and figures tell the tale. Nearly every State in the Union has more or less mules, and in the great majority of them the mules are valued on an average, \$10 higher than the horse. Is this not wonderful! Since you have your \$25,000, and even \$100,000 horses, and numbers galore valued at \$1,000 to \$10,000, yet the mule with his even valuation is worth more than the horse per head.

But one says, "This is in the mule States."

But is Connecticut a mule State? In that State horses are valued at \$73.06, and mules at \$87.73, in 1900.

Take the District of Columbia, in which is situated the capital of the nation, and mules are valued at \$75.69, while horses are only valued at \$67.93.

Now, if the mule can do this, when his dam is bred, in the country generally, to the jack only when she is deemed too much blemished or unfit to breed to a horse, what could the mule do if he had the chance of having for his dam the best mares in the land, such as are bred to these fine horses? We don't want these horse breeders to quit breeding, nor will they do it, for we are looking for better mares to get better mules from. Now, if we can increase the value of the horses of the country, and bring them up to the valuation of the mule, then the country would be richer by \$150,000,000, that is \$10 per head on her 10,000,000 of horses in the United States in 1890.

The live stock of the United States in 1880 was \$1,500,000,000, and in 1890 it was \$2,200,000,000 in round numbers, an increase of 50 per cent in ten years. Take the State of Illinois, with her



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1,135,000 horses in 1890, and put the valuation of the mule on them, and you have a State richer by \$13,350,000.

These illustrations show the possibilities you may attain.

Be sure to get something ready for the World's Fair, and bring it there, and bring Susan and the children, for it is going to be the biggest show, the grandest display and more of it than has even been exhibited on the globe.

Write me what you have in this line, and commence getting it ready, and if you want any information write me, and I will have your wants attended to at once.

J. L. JONES, Columbia, Tenn.
Member of the executive committee, in charge of the jack and mule department.

Breeding Up Alfalfa Possible.

T. J. LUCCOCK, CALIFORNIA.

Most farmers, and even alfalfa growers, if asked whether there is more than one kind of alfalfa would say, No, it seems to be all alike. Some of my neighbors disputed quite strongly with me when I spoke at a farmers' institute of the variations to be found in different alfalfa plants, refusing to believe that there is any real difference.

Of course, where there is a thick stand the stalks are all forced upright and mingle together, so that the characteristics of each can not be seen, but if you will carefully examine a field where the plants are very thinly set, and therefore have an opportunity to show the differences in their nature by their style of growth, you will see that they are very far from being all alike. Some will be lying so flat on the ground that it would be impossible to cut them with a mower, while others grow so upright that they look as if they had been tied to a stake. Then again the leaves on some plants are small and narrow, while those on others are large and round, and since the leaves are the best part of the plant this is of very great importance. If you will look at such a field a week or two after cutting you will see that some plants are only just beginning to grow, while others have already attained a height of 6 or 8 inches.

In the blossoms similar variations occur. On some plants they are almost white, while on others they are of a deep purple. Now, I contend that where nature has already made so many variations, man, by careful selection and other means, may make even greater and more important ones. This is a work which can not be done by the farmer, as he has neither the time, skill, nor the appliances to accomplish it, but the experiment stations have all the facilities, and I hope it will not be long before some station will take hold of the matter and succeed in giving us a better variety of alfalfa than we are at present cultivating. If only 100 or 200 pounds of hay per acre at each cutting could be added to the crop, by such improvement it would add millions of dollars annually to the income of alfalfa growers.

Supremacy of Anglo-Saxons.

There are few people who have more than a faint conception of what the consummation of the proposed Anglo-American Alliance would really mean.

Popular comprehension never realizes that in addition to having the supremacy of the ocean and being the wealthiest people in the universe the new nation would for countless other reasons be the most flourishing and consequently the happiest people in existence.

The new nation would become absolute sovereigns of the world, with a military, naval, commercial, financial, territorial, and population supremacy, bringing the whole earth under its thumb.

In the first place, there would be 473,500,000 Anglo-Saxons, as against 217,218,000 Russians, French, and Spanish. In the matter of national debts, each Anglo-Saxon would owe only \$3, while every Russian would owe \$6, and the unhappy subject of the Triple Alliance would have to disburse more than \$10.

The Anglo-Saxons would head the list with a yearly income of \$379,800,000 followed by allied Russia, France and Spain with \$319,370,600, and by Russia alone with \$133,103,800.

But, besides the advantages already noticed, the Anglo-Saxons have others which would go to make the new nation the most powerful and prosperous in the history of the world.

First of all, they are essentially successful in commerce; their export trade makes that of their competitors look small and feeble; and the facilities they possess for internal communication—that is, railways—and for external communication—their merchant navy—go to put the trade of the two countries generally in a flourishing condition.

Compare the exports of the allied Anglo-Saxons with Russia. We see that the Russian trade is about one-fourteenth that of the Anglo-Saxons, which amounts in a year to £825,251,600.

The trade of the new Triple Alliance is only just over a quarter of this—£239,920,600.

The Anglo-Saxon's superiority in railways is strikingly demonstrated by the lengths of three trains; the longest train, which represents their railways, measures 267,150 miles; the Russian train measures 80,555 miles, and the last one, representing the combined railways in Russia, France, and Spain, 167,260 miles.

In their navy of merchant vessels, also, the Anglo-Saxons, with a total tonnage of 19,236,000 tons, stand far ahead of all their rivals—Russia having a tonnage of only 967,000 and the Triple Alliance one of 3,037,000.

The last comparison we shall make is, perhaps, the most important of all.

It is between the military forces—on land and on sea—of the Anglo-Saxons, those of Russia, their greatest rival, and those of Russia, France, and Spain together, the assumption being that this is the greatest possible combination that can be formed against the Anglo-Saxon Empire.

Comparing first the land force of the three Empires, the figures given are to be taken as the utmost that each could raise in case of extreme need—the Anglo-Saxons, in spite of the fact that their standing army, compared with the armaments of some of her rivals is not large, could put in the field 67,714,000 men; the Russians 19,428,000, and France and Spain just over 12,000,000 between them, bringing the total for the Allied Empire to 31,516,000 men.

No comparison that could be made of the number of men in the navies of the three Empires or of the number of warships belonging to each, would do justice to all three Empires.

As far as the actual number of men are concerned, the advantage is on the side of the Anglo-Saxons; but, on the other hand, the number of ships in the navy of the Anglo-Saxon Empire would be less than the number in the Russian-French-Spanish Empire.

It must be remembered, however, that the quality of the ships in the Russian-French-Spanish Empire is inferior to that of the ships of the Anglo-Saxon navy.

The method which has been here employed to illustrate the respective importance of the navies of the three Empires has at least this recommendation that it affords justice to both sides.

It rests on the difference in the number of guns carried by the navies of the three Empires, and may be considered as a very fair criterion of their respective powers.

The Anglo-Saxon battery contains 13,319 guns; and considering that these are better manned than those of Russia, France, and Spain, they would probably have little trouble in overcoming such opposition as might be offered them.

This is the most certain in that the guns of Russia only number 5,013; and that those of Russia, France, and Spain together, only 10,993. With this striking preponderance in our favor, we should certainly have little need for anxiety on the score of invasion or expulsion by force of arms.

With these figures before us, there is little reason to doubt that the consummation of an alliance between the United States and Great Britain would bring into being a power greater than any that the world has seen in modern or in ancient times.

Against any single rival a contest waged by the new empire, whether in the arts of peace or in the grimmer business of war, could have but one result—crushing defeat for their enemy.

The reason for this is not far to seek. The Latin races have had their day, and their last pretensions to sovereign power of the world, or even of Europe, flickered out when at the beginning of the last century, the Saxons triumphed over them on the field of Waterloo.—Pearson's Magazine.

Oak Grange Farmers' Institute.

EDITOR KANSAS FARMER:—The fourteenth annual Farmers' Institute of Mission Township will be held in Oak Grange Hall on December 17 and 18. The evening of the 17th will be devoted to an experience meeting on the work of 1901, and on the 18th addresses will be made by Dr. Henry Wallace, editor of Wallace's Farmer, of Des Moines, Iowa; Prof. E. B. Cowgill, editor of the Kansas Farmer; Prof. H. M. Cottrell, of the agricultural college; Mrs. Margaret Hill McCarter, of Topeka; Hons. A. L. Brooke and Guilford Dudley, and others of Shawnee County. Especial attention will be given to

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THE YOUTH'S COMPANION, Boston, Mass.

the sowing, raising, feeding, and pasturing of alfalfa, as well as the material interests of our girls and boys. Good music is promised. A basket dinner on Wednesday. It is confidently expected to make this one of the best institutes held in the State. A large attendance of those interested in advanced agriculture is desired.

BRADFORD MILLER, President.

The Supreme Court at Washington has just rendered a decision which may give both the sugar refining trust and the beet sugar trust something to do besides fighting each other. Under this decision, until a law to the contrary shall be enacted by Congress, Philippine Islands products must be admitted to the United States duty free. This strikes both trusts as to sugar. It is said that sugar can be produced in the Philippines at half what it costs to produce it in this country. Immediately following the decision of the Supreme Court comes the news that the two sugar interests have ceased fighting each other, and that sugar has advanced about 33 per cent at Missouri River points.

Congress convened last Monday. President Roosevelt's first message was read to both branches on Tuesday. He eulogizes President McKinley, handles anarchists in his own vigorous fashion, holds that trusts should be regulated but not suppressed, favors a Chinese exclusion law to take the place of the one soon to expire by limitation, urges aid to American shipping, and that the tariff laws shall not be disturbed. Almost every prominent question of public interest is considered in the frank and manly way for which the President is noted.

The editor will be glad to have letters from over the State telling what feeds are being given to stock, how much of each kind, and how the animals are doing under present conditions.

FARMER AND CAPITAL \$1.25.

The Semi-weekly Capital, published twice a week at Topeka, Kansas, is an excellent 8-page Republican newspaper. It is issued Tuesday and Friday of each week and contains all the news of Kansas and the world up to the hour of going to press.

To a farmer who cannot get his mail every day it is as good as a daily and much cheaper.

By a special arrangement we are enabled to send the Kansas Farmer and Semi-weekly Capital both one year for \$1.25. This is one of our best combination offers and you can't afford to miss it. Address: THE KANSAS FARMER CO., Topeka, Kansas.

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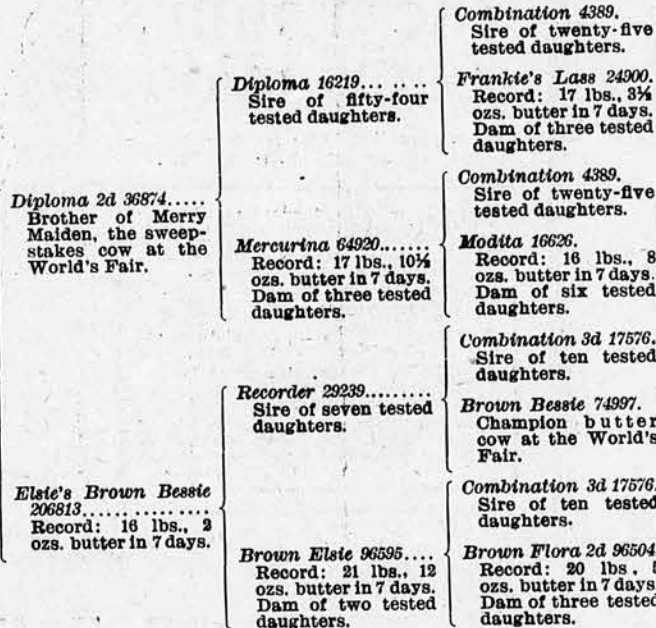
Santa Fe.
Address T. L. King, Agent Santa Fe, Topeka, Kans.

In the Dairy.

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

Brown Elsie's Grandson.

Last week we presented our readers with a cut and short article concerning Brown Elsie. The Kansas State Agricultural College is especially fortunate in having a grandson of this famous cow, Brown Elsie's Grandson 60412. This young bull was born October 22, 1900, and was purchased this last summer from H. C. Taylor, Orfordville, Wisconsin. An abbreviated pedigree follows:



cause they have a broader knowledge of the subject.

Harper Creamery Company, Harper, Kansas: We take pleasure in saying that we are in hearty sympathy with all of the work done at the Kansas college, and consider it one of the most valuable institutions in the State. No farmer nor dairyman can afford to be without the many practical and interesting bulletins you publish, and no young man who intends being an agriculturist or dairyman should miss the opportunity of being thoroughly equipped in the theoretical and practical knowledge necessary to make his business a pleasure and a success.

The Clyde Creamery, Clyde, Kansas: We consider the short dairy course of inestimable value to any of our young

Juggling of Separator Facts

AT THE

BUFFALO EXPOSITION

One of our desperate would-be competitors persists in its unscrupulous juggling of Separator facts and records at the Buffalo Exposition. One lie or misrepresentation stamped out it bobs up the next week with another. But everything must come to an end, and as a correspondent pertinently writes us "long after both these second-rate imitating machines and their projectors are turned into poor fertilizer the De Laval will continue—as in the past—to demonstrate its all-round superiority to anything else ever made in the shape of a cream separator."

The De Laval Cream Separators having been awarded the Gold Medal at Buffalo and the concern in question a gold medal on its combined exhibit of churns, separators and Babcock testers, it at once brazenly advertises having received "the Gold Medal and Highest Award" on its "separators," without qualification, in the hope to thus influence some possible separator buyer.

Next it proceeds to put out what purports to be a skim-milk record of the work done by the "U. S." machines in the Model Dairy at Buffalo. As a matter of fact this is not a record of the full run of the machines but simply of a selected part of it. Much of the "U. S." work during the first month of their run would not compare favorably with ordinary gravity setting. It was so bad that one machine was thrown out altogether. Their average for the full time shows a skim-milk loss of nearly three times the published figures.

Even then these so-called "skim-milk" records were but mere jugglery and show absolutely nothing as to the practical work of the machines. These "records" were achieved only through excessive speed, excessive power, cutting down capacity and running so thin a cream that more fat was lost in churning than saved in separating. The following voluntary statement from the engineer of the Model Dairy tells its own story in this regard:

BUFFALO, N. Y., November 2, 1901.

THE DE LAVAL SEPARATOR CO.,
74 Cortlandt St., New York, N. Y.

Gentlemen:—As engineer of the Model Dairy at the Pan-American Exposition, Buffalo, I was impressed with the following points of merit in the running of your Cream Separator. It did its work very smoothly and quietly, showing by its running its mechanical excellence. I could run it with a much smaller consumption of fuel and lower steam pressure. In fact, it took but one-fourth as much steam to do our work with it as the "United States" separator used to do the same work, and at no time did I have to force my fire or boiler to keep up the supply of steam as I did when the latter machine was in use.

We were sorry to see the De Laval leave on June 28 and glad to see it returned on August 9th, as it made less labor for all. Your representatives let the regular dairy force handle it, when your competitor, the "United States," had an expert to run their machine during the greater part of the time of their run, and even then he could not make a record for close skimming except by running his machine at an excessive speed of 11,000 to 12,000 revolutions a minute, cutting down the capacity, and making a thin cream. One morning in particular the cream was so thin that I had to run the churn two hours and twenty minutes before the churning was done.

While I am not an expert in creamery work, I hold a first class engineer's license and I want to say that your separator from a mechanical standpoint, in the design and finish of the parts and in the economy of fuel and labor, easily ranks first, and I do not wonder that your competitors would rather not place their machines alongside yours.

Yours very truly, JAMES F. DOWNY, Engineer Model Dairy.

The published records of the De Laval machine in the Model Dairy at Buffalo were made under practical use conditions, such as may be duplicated by any De Laval machine in every-day use, and the machine was run by the Exposition employes themselves and not by a manipulating expert juggling for "skim-milk" records.

THE DE LAVAL SEPARATOR CO.

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It will be noticed that there are references to a large number of tested cows in this pedigree. No cow is eligible to the tested list until she has produced at least 14 pounds of butter in seven days, or enough in one week to supply an ordinary person three months. The grandsire of Brown Elsie's Grandson, Diploma, is the sire of 54 cows with high records, and his ancestors trace to Eurotas, the cow that produced 778 pounds of butter in one year, or enough to feed one person fifteen years, or 15 persons one year. The cut of Brown Elsie with her record will be published in a subsequent issue.

D. H. O.

Creamerymen's Opinions of the Kansas Dairy School.

Forest Park Creamery, Ottawa, Kansas: We know something of the benefits to be derived from a dairy course, having a few men in our employ who have taken it, and we are also acquainted with several boys on the farm who have taken the special course, and it only requires a few minutes conversation with such boys to convince one of what the school has done for them along the line of dairying, about which a large majority of farmers are comparatively ignorant, especially in regard to care, breeding, and feeding to obtain best results.

The Continental Creamery Company, W. F. Jensen, vice president, Topeka, Kansas: I think you are doing some excellent work at your college. I will venture to say that no other dairy school or experiment station in the United States is to-day securing the practical results that you are, and that is considered to be a fact all over the United States. Your dairy school is the largest factor to-day in this State in developing interest and knowledge in dairy matters so necessary for the dairy interests of the State. If you enlarge further and make your dairy school an all year institution, the results will be inestimable in its good influence for the welfare of the State.

The Basehor Creamery, F. H. Meyer, proprietor, Basehor, Kansas: I will be glad at any time to cooperate with the college in the cause of dairying and especially the dairy school. I have found that wherever I have been, that students of dairy schools have the preference and always command a salary over those who have only experience, be-

men who expect to engage in any branch of dairying.

The Hesston Creamery Company, Newton, Kansas: We have nothing but kind words for the Kansas State Dairy School, and will be glad to do anything that may further its interests.

Pleasanton Creamery, Pleasanton, Kansas: We will gladly do anything we can to help the dairy school, as we think it is just what the great State of Kansas needs.

Mayetta Creamery, Mayetta, Kansas: We regard the dairy school of great importance to all classes that handle cows, either for the creamery or private dairying.

Cimarron Cheese Factory, Cimarron, Kansas: I think it very necessary for dairymen to have the knowledge you are trying to disseminate, and I want to send my son there to take the course this winter. Consider this an application and give him a place.

The Nortonville Cheese Manufacturing Company, Nortonville, Kansas: We are glad of a chance to help advertise your short course, or any other department of our Kansas State Agricultural College. The people of the State do not appreciate the work that is being done for them at the agricultural college.

Girard Creamery and Cold Storage Company, Girard, Kansas: We think the dairy school very valuable to the people. We will do all we can in helping it along. Any time we can be of any service to you, let us know.

Alsbaugh Bros., Floral, Kansas: We think the dairy school a grand thing for patrons as well as creamerymen, and only wish more would attend.

The Belle Springs Creamery Company, Abilene, Kansas: We have been watching with interest the results of the experiments which have been conducted during the last several years at the agricultural college. The results of the experiments you have made there during this period along the line of farm work, and especially dairy work, we deem invaluable to people interested in farming and dairying. We believe that to anyone who can possibly do so, that the time and cost, which we understand is very small, spent in attending the farm and dairy courses which you have there is time and money well spent.

Cedar Vale Creamery and Power Company, M. O. Awe, lessee, Cedar Vale, Kansas: I am well aware of the fact that if any of our young men could be induced to attend the short dairy course it would be a stimulant to the dairy business and beneficial to the farmers, and indirectly the creameries. By giving more attention to feeding and breeding dairy animals I think the dairy school will accomplish what it is supposed to do—the making of practical dairymen. I have attended 2 terms of dairy school myself, and will make it 3 if I ever have another opportunity.

The Fulton Creamery Company, Ful-

ton, Kansas: We believe that you are taking the right course, and that your dairy school should be attended by the young farmers generally. Such instruction as you suggest would be of inestimable benefit to them and would make dairy work not only pleasant but profitable, and assist materially in building up the creamery interests of the State. From the character of the bulletins issued by the Kansas State Agricultural

College, we are free to say that the young men of the country need seek no further in order to get the best results, for the time spent in securing instruction, in this most profitable feature of farm and dairy work.

Brady-Meriden Creamery Company,

To make cows pay, use Sharples Cream Separators. Book "Business Dairying" and Catalogue 287 free. West Chester, Pa.



MARKET REPORTS.

Kansas City, Dec. 2.—Cattle—Receipts, 8,061; calves, 266. The market was steady to 10 cents lower. Representative sales: SHIPPING AND DRESSED BEEF STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for various cattle categories.

WESTERN STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for western steers.

NEW MEXICO STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for New Mexico steers.

TEXAS AND INDIAN STEERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for Texas and Indian steers.

TEXAS AND INDIAN COWS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for Texas and Indian cows.

WESTERN COWS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for western cows.

NATIVE COWS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for native cows.

NATIVE FEEDERS.

Table with 4 columns: No., Ave. Price, No., Ave. Price. Lists prices for native feeders.

Hogs—Receipts, 12,089. The market opened 5 to 10 cents lower and closed nearly steady. Representative sales:

Table with 4 columns: No., Av. Price, No., Av. Price. Lists prices for hogs.

Sheep—Receipts, 2,068. The market was strong. Representative sales:

Table with 4 columns: No., Av. Price, No., Av. Price. Lists prices for sheep.

Chicago Live Stock.

Chicago, Dec. 2.—Cattle—Receipts, 20,000. Good to prime steers, \$8.40@7.25; stockers and feeders, \$2.00@4.25; Texas fed steers, \$4.75.

Hogs—Receipts, 60,000. Mixed and butchers, \$5.70@6.10; bulk of sales, \$5.65@5.90.

Sheep—Receipts, 32,000. Good to choice wethers, \$3.50@4.10; western lambs, \$3.50@4.10.

St. Louis Live Stock.

St. Louis, Dec. 2.—Cattle—Receipts, 2,300. Native steers, \$3.50@4.25; stockers and feeders, \$2.40@3.60.

Hogs—Receipts, 6,500. Pigs and lights, \$5.60@5.70; butchers, \$5.75@6.20.

Sheep—Receipts, 1,500. Native muttons, \$2.75@3.60; lambs, \$3.75@4.30.

Omaha Live Stock.

Omaha, Dec. 2.—Cattle—Receipts, 2,600. Native beef steers, \$3.75@6.75; western steers, \$3.75@5.30; Texas steers, \$3.50@4.40; stockers and feeders, \$2.75@4.40.

Hogs—Receipts, 9,200. Heavy, \$5.90@6.05; bulk of sales, \$5.90@6.00.

Sheep—Receipts, 28,000. Common and stock sheep, \$2.60@3.25; lambs, \$4.25@4.75.

Kansas City Grain.

Kansas City, Dec. 2.—Wheat—Sales by sample on track: Hard—No. 2, 72@72 1/2c; No. 3, 70@72c.

Soft—No. 2, 76c; No. 3, 74@75c. Mixed Corn—No. 2, 68 1/2c; No. 3, 65 1/2@66c.

White Corn—No. 2, 66 1/2c; No. 3, 66c. Mixed Oats—No. 2, 47 1/2@48c; No. 3, 47c.

White Oats—No. 2, 47 1/2@48c; No. 3, 47c. Rye—No. 2, nominally 63 1/2c.

Prairie Hay—\$5.00@13.50; timothy, \$9.00@14.00; clover, \$9.50@12.00; alfalfa, \$10.50@12.00; straw, \$5.00@5.25.

Cotton Seed Meal—\$25.00 ton in car lots. Linseed meal, \$29 per ton.

Chicago Cash Grain.

Chicago, Dec. 2.—Wheat—No. 2 red, 77@78c; No. 3, 74@78c; No. 2 hard winter, 74@76c; No. 3, 73 1/2@74 1/2c; No. 1 northern spring, 75@76c; No. 2, 73 1/2@74 1/2c; No. 3, 69 1/2@73 1/2c.

Corn—No. 2, 63 1/2c; No. 3, 61 1/2@62c. Oats—No. 2, 43 1/2@44c; No. 3, 43 1/2c.

Futures: Wheat—December, 74@74 1/2c; January, 74 1/2c; May, 74 1/2@74 3/4c. Corn—December, 62 1/2c; January, 62 1/2c; May, 64 1/2c. Oats—December, 42 1/2c; May, 43 1/2@43 3/4c.

St. Louis Cash Grain.

St. Louis, Dec. 2.—Wheat—No. 2 red cash, elevator, 80 1/2c; track, 81c; No. 2 hard, 76c. Corn—No. 2 cash, 64 1/2c; track, 66c. Oats—No. 2 cash, 45 1/2c; track, 46 1/2c; No. 2 white, 47@47 1/2c.

Kansas City Produce.

Kansas City, Dec. 2.—Eggs—Fresh, 21c per doz. Butter—Creamery, extra fancy, separator, 22c; firsts, 18c; dairy, fancy, 17c; packing stock, 13c; cheese, northern full cream, 10c; Missouri and Kansas full cream, 10c.

Poultry—Hens, live, 5c; roosters, 20c each; springs, 6c lb.; ducks, young, 5 1/2c; geese, 4 1/2c; turkey hens, 6c; young, weighing over 7 lbs., 6c; young gobblers, 5c; pigeons, 50c doz.; squabs, \$1.25@1.00 doz. Choice scalded dressed poultry is above these prices.

Game—Rabbits, drawn, 30c per doz.; squirrels, 30c; frogs, 50c@1.00 per dozen; plovers, 75c@1.00 per doz.; jack snipe, 75c@1.00 per doz.; sand snipe, 50c per doz.; ducks, mallard, per dozen, \$1.00 per head.

\$3; canvas back, \$2; teal, \$2; mixed, \$1.50. Potatoes—\$1.10@1.20 per bushel in small lots; car lots, \$1.04; sweets, \$3.25@3.50 per barrel. Fruit—Apples, \$1.00@5.00 per barrel; cranberries, \$7.00@7.50 per barrel; California pears, \$2.25@2.60 per box. Vegetables—Navy beans, \$2.20 bu.; cabbage, \$1.00@1.75 per cwt. Onions, 90c@1.10 bushel in job lots; beets, 40@60c bu.; turnips, 15@25c bushel.

Special Want Column.

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

CATTLE.

WANTED—Your best cash price and full description (with registered numbers) on 52-year-old Hereford bulls. Give exact location of farm, county, railroad, and your distance and direction from town. Address Henry Krider, Manager, Cambridge, Harper Co., Kans.

FOR SALE—One dark red, registered Shorthorn bull; a sure breeder. Brookover Bros., Eureka, Kans.

FOR SALE—Hereford cattle—wholesale and retail, 175 in herd; and Cotswold sheep—5 rams and 25 ewes. Railway station, East Fairmont, on Santa Fe R. R.; Postoffice, Wallula, Kans. H. A. Naber.

FOR SALE—3 pure Crutckshank-Shorthorn bulls. H. W. McAfee, Topeka, Kansas.

SHORTHORN CATTLE SALE—I will offer at public sale, 1 1/2 miles south of Marysville, at 2 o'clock p. m., on Tuesday, October 15, 17 registered Shorthorns, 19 high grade Shorthorns, and 3 thoroughbred Jerseys. Lewis Scott, Marysville, Kans.

HORSES AND MULES.

160-ACRE IMPROVED FARM—Sixty acres in growing wheat; for sale on easy terms. Address F. D. Nichols & Son, Norfolk, Kans.

FOR SALE—The Percheron stallion, Brilliant Junior 24588; 7 years old, weight 1,850 pounds, color black. Also two Mammoth Jacks, 4 and 6 years old, color black. Will sell cheap, or trade for good land. John Stewart, Eldorado, Kans.

FOR SALE—One Percheron stallion, 2 years old; also one Mammoth Black Jack, 4 years old, 15 1/2 hands high, good sire. Address S. C. Hedrick, Tecumseh, Kas.

FOR SALE—At a bargain—young draft stallions. A. I. Hakes, Eskridge, Kans.

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

FARMS AND RANCHES.

FOR SALE—Eighty-acre improved farm, 14 miles from Topeka. For full particulars, address Lou R. Dearborn, Silver Lake, Kans.

FOR SALE—Thirty-five acres of land, three miles north of Soldier Creek on Central Avenue. \$1,600. In cultivation. No buildings. Address 1105 Harrison Street, Topeka, Kans.

FOR SALE OR TRADE—160-acre improved farm, in central Kansas. A bargain. For full particulars, address Jno. Fox Jr., New Cambria, Kans.

FARM LOANS—Low rate, best terms, 5 to 10 years with privilege to pay in full or in partial payments before due. Loans can be closed at once. Call on or write The Kansas Mutual Life Insurance Co., 701 Jackson Street, Topeka, Kans.

160 ACRES of land for sale cheap, in the mineral and fruit belt of Missouri. No incumbrance, title perfect, 50 acres in cultivation, two-room log house with shed porch, good well in yard, cellar, smokehouse, barn, corn crib, garden, 8 miles from railroad point, 1 1/2 miles from postoffice, 1 1/2 miles from school, 3 miles church. Price \$1,200. Address R. L. Olive, Hume, Mo.

POULTRY.

FOR SALE—White Holland turkeys. Egg orders booked. Annie D. Galbraith, White City, Kans.

ROSE-COMB WHITE LEGHORN COCKERELS—50 cents. Mrs. John Hill, Vinland, Kans.

SWINE.

FOR SALE—Black U. S. Poland-China herd boar, Potter U. S. 17001 A.—a sure breeder of good litters. Also 10 young boars. Leon Calhoun, Potter, Atchison Co., Kans., Rural Route No. 1.

PIGS RIGHT—Prices right. Duroc-Jerseys and Poland-Chinas, all sizes. Write D. Trot, Abilene, Ka.

PEDIGREED POLAND-CHINAS—\$5 each; registered Shorthorns cheap. Send for my Pig Booklet, FREE. M. C. Hemenway, Hope, Kans.

TEN FANCY BOAR PIGS—By M. B. P. out of prize-winning dams, for sale at one-half price, to make room for fall pigs. Jos. R. Young, Richards, Mo.

EMPLOYMENT.

EMPLOYMENT—People desiring employment of any kind are invited to correspond with the undersigned; employment guaranteed; state kind of work desired. PEOPLE WANTING HIRED HELP for any kind of work should also address People's Employment Agency, 501 Kansas Ave., Topeka, Kans.

AGENTS.

WE WILL GIVE the exclusive agency of our specialty to one canvassing agent in every town; up-to-date article and big profits. Daisy Mfg. Co., Seymour, Iowa.

Agents: Either sex are earning \$4 to \$10 a day selling our 25-cent household necessity. Write us to-day. Domestic Supply Co. Sample Free. DETROIT, MICHIGAN.

When writing advertisers please mention Kansas Farmer.

SHEEP.

COTSWOLD SHEEP—I have two registered, and 12 high-grade Cotswold rams, lambs, and yearlings for sale. Write me for prices and descriptions. John H. Rust, Altamont, Kans.

MISCELLANEOUS.

WANTED—Men and women canvassers, to sell our choice roasted pound package coffee, exclusively or as a side line. Big money for good canvassers. Don't miss this chance. Address Thos. M. McBee & Co., Mansfield, Ohio.

WANTED—Cane and Kaffir-corn seed in car lots. Mail samples and quote price. McBeth & Kinnison, Garden City, Kans.

WANTED—Two cars of good alfalfa hay. Give price on cars at your station. L. K. Heselbine, Dorchester, Green County, Mo.

WANTED—If you wish to buy or sell corn, oats, hay, cane seed, kaffir-corn, corn chop, or anything in the feed line, correspond with us. Western Grain & Storage Co., Wichita, Kans.

HIGHEST PRICE paid for cane seed, alfalfa, millet, kaffir-corn, and pop corn. Please send samples. Kansas City Grain & Seed Co., Kansas City, Mo.

OYSTER SHELLS—Eighty cents per 100. Poultry and stock foods, and feed. Topeka Seed House, 308 Kansas Avenue, Topeka, Kans.

WANTED—Alfalfa hay. Send price and amount for sale. E. B. Davis, Columbus, Kans.

CHOICE ALFALFA SEED, price \$4.50 f. o. b. J. E. Good, Canada, Kansas.

AFFALFA SEED—None better than I have. Buy direct from a grower. Quantities to suit. Write for samples and prices. V. S. Jones, Syracuse, Kans.

WANTED—Alfalfa, millet, cane seed, kaffir-corn, milo maize, and pop corn. If any to offer please correspond with us. Kansas Seed House. F. Barteldes & Co., Lawrence, Kans.

WOOL WANTED—We have just completed our New Woolen Mill in North Topeka and want at once 200,000 pounds of wool for which we will pay the market price. Write us if you have wool for sale. Western Woolen Mill Co., North Topeka, Kans.

BALMOLINE—Nature's Wonderful Healing Salve. Man or Beast. Druggists, 25 and 50 cents. Trial size 4 cents from B. H. De Huy, Ph. D., Abilene, Kans.

ALFALFA SEED—Crop of 1901, pure and fresh. Write for prices. McBeth & Kinnison, Garden City, Kas.

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.

PATENTS.

UNITED STATES PATENTS AND FOREIGN. F. M. COMSTOCK & CO. OFFICE 528 KANSAS AVE., TOPEKA, KANSAS.

PATENTED AND UNPATENTED INVENTIONS bought and sold. Lucas & Co., St. Louis, Mo.

J. A. ROSEN, attorney and counselor in patent, trademark, and copyright causes. Patents procured and trademarks registered. Office, Rosen block, 418 Kansas Avenue, Topeka, Kans.

English and Fitch Ferrets. Trained to Hunt..... RATS, Rabbits, Etc. Prices Low..... FARNSWORTH BROS., Elk Falls, Kas.

..Buy a.. Fine Farm.

160 ACRES, one mile south of Girard, Crawford Co., Kans. Fine farm near a fine county seat city, in splendid locality. Satisfy your family by locating them on a nice place where they can have city society, and advantages. \$4,250. Easy terms.

INLAND SECURITY CO.,

54 Waterworks Bldg., Kansas City, Mo. We offer farm loans at lowest rates. Write us. 200 other Farms for sale.

Two Rings Free!

We will give these two SOLID GOLD laid Rings, one set with large Garnet and three Pearls, one with Ruby and two Brilliants, free to anyone that will sell 12 of our Gold Plate Enamelled Brooches set with different colored stones at 10 cents each, and sends us the \$1.20. No money required until brooches are sold. We take back all not sold. Address HOWARD MFG. CO., 6 W ST., PROVIDENCE, R. I.

THE LINCOLN IMPORTING HORSE COMPANY,

LINCOLN, NEBRASKA. The Largest Importers of HIGH CLASS Draft Stallions in all the West.

Our last importation arrived October 14. They were selected by two as competent horse judges as ever crossed the ocean. Our facilities for building up and acclimating foreign stallions can not be excelled in the United States, our main barn costing over \$10,000.

At the present time we have a grand lot of Percheron and Shire stallions, 2, 3, and 4 years old. Write us for further information; would much prefer to have you visit our barns where you are made welcome and entertained with an exhibit of the best specimens of the up-to-date drafter. Long distance telephone in our office—575.

When writing advertisers please mention Kansas Farmer.

The Stray List.

Week Ending November 21. Marion County—Ira S. Sterling, Clerk.

STEER—Taken up by Wm. Meyer, in Lost Springs tp., one red Hereford steer, 3 years old, left ear off white face; valued at \$40.

For Week Ending November 28. Ford County—S. P. Reynolds, Clerk.

HORSE—Taken up by Lillard Sanders, of Dodge tp., November 21, 1901, one dark bay horse, 7 years old, small star in forehead, white spot on nose, left hind foot white; valued at \$25.

Coffey County—W. M. Palen, Clerk. COW—Taken up by J. N. Gray, in Neosho tp., (P. O. Crandall), November 7, 1901, one black cow, about 7 years old, both ears cropped; valued at \$20.

Marion County—Ira S. Sterling, Clerk. STEER—Taken up by W. H. Fitch, in Milton tp., one roan steer, 1 year old, swelled part in left ear; valued at \$16.

Montgomery County—D. S. James, Clerk. HEIFER—Taken up by W. O. Evans, in Parker tp., (P. O. Coffeyville), one red heifer calf, 1 year old, underbit under both ears; valued at \$15.

Also one red brindie heifer; blotched face, 1 year old, underbit under both ears; valued at \$15. Montgomery County—D. S. James, Clerk.

COW AND CALF—Taken up by W. F. Yager, in Caney tp., near Havana, November 21, 1901, one cow, white line on back, white to belly, figure 4 on right hip, letter S on left hip, crop off both ears, all in left ear; valued at \$14. One white and yellow male calf, 6 months old; valued at \$3.

Week Ending December 5. Atchison County—S. S. King, Clerk.

COLTS—Taken up by Frank Hunn, in Arrington, Kans., one 2-year-old sorrel horse colt, blaze face, 4 white feet. Also one 1-year-old sorrel mare colt. Also one 1-year-old black horse colt.

Chautauque County—C. C. Robinson, Clerk. HEIFER—Taken up by E. E. Cornue, in Salt Creek tp., (P. O. Colfax), November 15, 1901, one red heifer, star in face, 1 year old; valued at \$12.

STEER—Taken up by same, one red steer, white face, 2 years old; valued at \$15. STEER—Taken up by same, one red steer, diamond brand on left hip, 2 years old; valued at \$20.

Morris County—A. W. Loomis, Clerk. HEIFER—Taken up by A. H. Johnson, in Grand View tp., (P. O. Herlington), November 5, 1901, one small, red yearling heifer, a cut off under side of left ear; valued at \$10.

Cherokee County—S. W. Swinney, Clerk. HEIFER—Taken up by Sol McNulty, in Sheridan tp., (P. O. West Mineral), November 22, 1901, one light red heifer, 1 year old, mark on right ear; valued at \$15.

Greenwood County. HEIFER—Taken up by A. J. Osborn, in Lane tp., one red heifer, white face, 1 year old, underbit in left ear.

Paint Your Roofs WITH DONKEY PAINT

One Coat will last 5 Years on metal, wood or felt. Rust proof and proof against moisture, acids, alkalis, ammonia, coal smoke, heat and cold. Good fire resister; great preserver.

One gallon will cover 300 square feet of surface. Requires no thinning. Comes ready to apply. Write for our low cash prices and descriptive circular.

THE KANSAS CITY ROOFING & CORRUGATING CO., 218-220 W. 3rd St., Kansas City, Mo.

Introduction Offer.

Write at Once if You Want an ANN ARBOR QUICK LIGHTING GASOLINE LAMP

...FOR CHRISTMAS... SUPERIOR MFG. CO., - ANN ARBOR, MICH Advertising Department.

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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. Bachelier, 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.

National Master Jones' Annual Address to the National Grange.

The afternoon session was held in City Hall, Lewiston, it being deemed inadvisable to meet in a smaller place for so large a gathering.

The meeting was public and was devoted entirely to the annual report of the National Master Aaron Jones, of South Bend, Indiana.

Mr. Jones spoke in a clear voice and a forceful manner, and his address is considered by all one of the finest ever delivered before the National Grange.

We present the address in part as follows:

To the Officers and Members of the National Grange:

The thirty-fifth annual session of the National Grange is the most important meeting ever held by the Patrons of Husbandry. At no time in the history of our country have farmers needed the advantages of organization as at the present time. Farmers everywhere understand their necessity and are seeking information as to the best form of organization. There never has been a time in the history of agriculture when there was a greater need of discussion of all matters relating to the farm, the relation of agriculture to other industries, and the effect of legislation in this and other countries. The prominence of reciprocity treaties, as well as recent events and pending treaties, make information of the world's markets a necessity. The grange affords the opportunity for the fullest discussion, expression, and far-reaching views on all these questions. The work done and the recommendation made at this session will be read by more people and will wield a greater influence than any meeting of farmers ever held. Members of the National Grange in your delegate capacity—representing sovereign States of this republic—you have a vast responsibility resting upon you. On the wisdom of your action the future destiny of the grange depends. Not only the order of Patrons of Husbandry, but the entire interest of our country will be greatly advanced by your wise and considerable action at this meeting.

CONDITION OF THE ORDER.

I am pleased to state the order is prospering. More new granges have been organized this year than in any other year for the past quarter of a century. The report of the State masters and of the worthy secretary, treasurer, and executive committee of the National Grange will reveal a most satisfactory condition. Harmony and good will prevail throughout our vast membership. Our members are enthusiastic, hopeful, earnest, and determined in their efforts to make the grange still more helpful and better in all its work, to broaden its scope and extend its membership and influence.

THE ACHIEVEMENTS OF THE ORDER.

The history of the order is ripe with good work, well and successfully done. The battles it has fought and won, contending with lack of knowledge, lack of discipline, and little confidence in the staying qualities of farmers in an organized effort against corporate power, and prejudice, have demonstrated its power. Our success along legislative lines is gratifying to every patron. In the several States improved laws on taxation, education, pure food, production of dairy products, protection of stock from contagious diseases, good roads and protection to forests, and many other important matters have been secured. In national legislation we have the Secretary of Agriculture; the Interstate Commission with its magnificent record; the Industrial Commission, whose findings on some of its more important work have not been made public; modifications of the Patent Laws; national and State experiment stations; and the establishment of free rural mail delivery. The modification and in some cases the abandonment of so-called reciprocity treaties, wherein agricultural interests were not sufficiently guarded and protected. The influence of the grange was an important factor in preventing much legislation that

would have worked injury to agriculture and the country. Among some of the more important of these were so-called irrigation schemes and the ship subsidy bill. Along social and educational lines, the inspiration of higher ambitions; the improvement of society; the elevation of citizenship; the bettering of the country homes, surroundings and conditions, and the increased pleasures and happiness in rural homes, an achievement the value of which to the individual and the country can not be stated. These purer streams of citizenship flow out into the great ocean of society and tend to elevate and improve all mankind.

In addition to the educational, social, cooperative, and legislative work, the grange must continue to hold its position as the best school where the most approved system of agriculture is taught in such a practical way, that farmers can not afford to lose the advantage of membership. The commercial side of farming, or how to sell their products of the farm to realize the highest measure of profit, is equally important with that of the production, a question that in the future, as in the past, will receive the most careful attention and thought of those members of the order. Production and sale are two inexhaustible subjects ever changing as conditions, fertility, and development in this and other countries are constantly changing. The law of supply and demand lies at the foundation of the markets, when normal conditions prevail. The influence of the order will be exerted to have the natural law fix market values. The producer and consumer are equally interested in preventing the markets from falling into the hands of professional manipulators and combines. Farmers and the entire people are interested in the economical management of the farm. Some time ago a distinguished agriculturalist of England was traveling in this country and his observations caused him to make this remark: "The wastes of the farmers of the United States, exceeded the net profits, and the people of France and Germany could live on the wastes of the American farms."

AGRICULTURAL COLLEGES.

European countries not only teach the science of agriculture in their public schools, but have established and liberally supported agricultural colleges, schools of horticulture, forestry, dairying, veterinary science, sheep, husbandry, and experimental farms; in short, schools to properly teach all that pertains to agriculture in their respective countries.

Senator Morrill, of Vermont, in 1862, drafted and presented to Congress an act donating a large amount of public lands for the establishment in the several States and Territories of the United States of colleges for instruction in agriculture and the mechanic arts. The act set forth that "the leading object should be to teach such branches of learning as are related to agriculture and the mechanic arts in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." Senator Morrill and others in their addresses in the Senate, while the measure was under consideration, pointed out the advantages that would come to agriculture and the country by the passage of the pending measure, and the establishment of the contemplated colleges. Agriculture was to become profitable, and farmers prosperous and happy as a result of teaching in these colleges those branches of learning related to that important industry. Have those anticipations been fully realized? If not, why not? Have farmers done their full duty toward these colleges? Have the agricultural colleges done all they could and should have done to make them of the greatest value to the agricultural interests of the country? Have the Boards of Trustees of Agricultural colleges been in full sympathy with the spirit and purpose of the act donating the public lands for these schools? Have the presidents and professors been in all cases in full sympathy with practical agriculture and in close touch with farmers?

Many farmers feel that in these schools in many cases, an influence has been exerted on the minds of their children away from the farm rather than toward it. On this account many farmers who desire their children to follow farming do not send them to (the so-called) agricultural colleges. Whether this be true or not, the feeling exists, the damage is done, and our agricultural colleges and their influence is injured, and the farmers have lost the golden opportunity of securing to agriculture the advantages contemplated by the wise statesmen, who enacted the law in 1862. Most of the legislatures in the several States have been liberal in their

appropriations to aid these schools. I desire to call attention to these schools and ask the order in the several States to investigate their agricultural colleges and their management, and see whether it is conducted along the lines contemplated by the act creating it, and to the best interest of agriculture in their respective States. If not, then insist and take such action as will cause such changes to be made as will make their agricultural school in practice as well as in name an agricultural college. Urge your legislature to make such appropriations as will provide for all the needs of the school in lands, buildings, and equipment as will make it a first-class agricultural college. Insist that the Boards of Trustees shall be practical men, who have faith in agriculture, who will appoint a president and professors who are in full sympathy with agriculture, men who believe that farming is as honorable as any other business or profession, and by proper management can be made profitable; who will use all their influence in securing the teaching of scientific agriculture in our public schools, and assist in all honorable methods in advancing the agricultural interests. Anyone not willing to do that, in our opinion, should not occupy the position of trustee, president, or teacher in our agricultural colleges.

FIELD MEETING.

The field meetings held by the order throughout the country the past year have been an honor to the organization and have done the order and the country a vast amount of good. These meetings are the means of calling attention to the work of the order, the legislation, State and national, that should be secured to place agriculture on equal footing with other industrial interests, and that will also be of benefit to our country. At these meetings these important questions can be discussed without partisan bias from the standpoint of citizenship. The complex and diversified industries in a great country like ours, having seemingly interests in conflict with each other when properly understood are so blended that the interdependent relation of one to the other is so complete that any laws that discriminate to advance the one at the expense of another eventually injure all. Our country, our people, all occupations, and all sections are interested in securing and enforcing laws that foster and equally protect every industry, labor, and capital, alike. These meetings should be continued and arrangements made early in the coming winter for the meetings in the summer. The beneficial effect of the meetings can be augmented by securing the attendance of all whom it is especially desirable to reach.

DEATH OF PRESIDENT M'KINLEY.

When the sad and startling news of the assassination of President McKinley flashed over the country patriotic men of all sections and parties were drawn close together and moved to tears. Partisan strife was hushed and still. The assassin had tried to shoot down liberty, to overturn our glorious free institutions by striking down its representative, Wm. McKinley, a true, patriotic man, loyal to country, an honest man, a good, kind-hearted citizen, a devoted model husband, is dead, but our glorious country and its institutions still live. Anarchy, with hand red with human blood, with all its baleful influence, must be blotted out. The influence of our order will ever stand for destroying anarchy and all the causes that tend to produce it.

THE PRESS.

The grange press has rendered valuable aid and each year demonstrates its increasing importance to the welfare of the order. I am pleased to be able to say, as I read these papers, that all of them have been ably and wisely edited and their columns kept free from partisan, sectional, or sectarian bias. Our members should recognize the importance of cooperating with our friends and not only write for but subscribe to and read carefully. No matter how many other papers you take, subscribe for at least one grange paper. The agricultural and local press have each been friendly to our principles and done much to advance our cause. They publish good reports of public meetings and have published the addresses of the legislative committee to State legislatures and to Congress. The work of the order and the necessity of appropriate legislation on the various important matters are thus brought to the attention of millions of people that would be reached in no other way, thus educating the people to the work done by the order and the need of the legislation sought. Our members should also cooperate with these papers and heartily support them. Our practical farmers do not write enough for the press. Farm-



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ers as a rule do not take and read enough papers, for the investment in good papers always pays. The press is the great educator of public sentiment and farmers should be in close touch with it. In an address of this kind it would be eminently improper to name any of the publications owned and published as private enterprise, that have done such valuable service to our order, unless all were mentioned. This objection does not lie against the Quarterly Bulletin published by the order of the executive committee of the National Grange (not for financial gain) and one copy sent to each grange in the United States, gratuitously and published solely for the good of the order. This Bulletin has been wisely and ably edited by the worthy lecturer of the National Grange. Its influence in building up the order is of incalculable value. It has been kept free from partisan, sectional or sectarian bias, and it is recognized and taken as authority on all matters of which it treats.

LEGISLATION.

I again call attention to the legislation demanded by the agricultural interests of the country, considered, approved, and urged at the thirty-third and thirty-fourth sessions of the National Grange. For the arguments in support of the legislation demanded, I respectfully refer to the journal of proceedings of the thirty-third and thirty-fourth annual sessions and the action of the various committees and the addresses of the legislative committee to the Congress of the United States.

(1) Free delivery of mails in the rural districts, and that the service be placed on the same permanent footing as the delivery of mail in the cities, and the appropriations be commensurate with the demands and the benefits of the service.

(2) Provide for postal savings banks.

(3) Submit an amendment to the Constitution providing for the election of United States Senators by direct vote of the people.

(4) Submit an amendment to the Constitution granting the power to Congress to regulate and control all corporations and combinations preventing monopoly, and the use of their corporate power to restrain trade or arbitrarily establish prices.

(5) Enlarge the powers and duties of the Interstate Commerce Commission as provided in Senate Bill No. 1439.

(6) Regulate the use of shoddy.

(7) Enact pure food laws.

(8) Provide for the extension of the markets for farm products equally with manufactured articles.

(9) The enactment of the anti-trust law, clearly defining what acts on the part of any corporation would be detrimental to public welfare.

(10) Speedy constructions of the Nicaragua Canal by the United States.

(11) The speedy construction of a ship canal connecting the Mississippi River with the Great Lakes and the Great Lakes with the Atlantic Ocean.

(12) Revising the fees and salaries of all federal officers, and placing them on a basis of similar service in private business.

(13) Protect the dairy interests by the passage of House Bill No. 3717.

I again recommend that the several State Granges that they continue to urge upon the respective State legislatures the enactment of appropriate leg-

islation on the following important matters:

(1) Anti-trust law and provision for State inspection of all corporations.
 (2) Secure law on taxation that will compel all property to bear its just proportion of taxation.

(3) Pure food law.
 (4) Provide State Railway Commission with full power of fixing maximum rate of freight and passenger service on all railways subject to their jurisdiction.

(5) Such a revision of the fees and salaries as will place them on an equitable basis.

Farmers should press their claims from year to year until the legislation sought is secured, and hold their representatives in State legislatures and in Congress officially and personally responsible for their action on all measures affecting agricultural interests. The road to success in legislative matters as in all other matters is found only in remaining courteous, persistent, and firm and unyielding in demands, and emphasizing them with all the power we possess as citizens.

RURAL MAIL DELIVERY.

We are pleased to note the increasing popularity of this branch of the mail service. Our efforts as the representatives of the agricultural classes should be for its continued extension until every farm-house will be enjoying the benefits of this service. Through the courtesy of the Post Master General Smith I am able to inform you that the estimates for rural delivery for the year ending June 30, 1903, is \$6,250,000. This large increase is evidence of the increasing popularity and demand for this service.

TRUSTS.

On account of the vast interests involved I desire to say that the formation of trusts along the lines which have been adopted is a menace to republican institutions and is leading to a complete change of our government. Such an unjust distribution of wealth, obtained by such methods creates discontent, destroying energy among the people and places a dangerous power in the hands of a few. To such a degree has commercialism developed that individual rights and interests are ignored in the greed and unscrupulous methods adopted by these vast aggregations of capital. When the love of gain dominates the minds of men to such a degree that the benefits of labor and the use and value of property is taken from the poor, the middle classes, and appropriated to the few, without rendering value received, whether done under the form of laws or any other method, has a tendency to make men desperate. When a man's reputation, standing, and manhood are measured by the dollars he represents or controls, no matter how acquired, whether the result of years of business energy, industry, and the practice of economy, or the result of a modern trust, methods of crushing opposition and practicing extortion; when the spirit of commercialism reaches this condition, which it is fast approaching, our republican form of government is in great danger. Again I reiterate that State and national legislation of the most drastic character should be enacted and vigorously enforced. Amend the Constitution of the United States, giving Congress full power to modify or change our entire tariff system if need be and place on the free list every commodity now controlled by trust combinations and compel all transportation companies to give the same rate of freight to all persons and corporations. Some great disaster might destroy our prosperity, burn our cities, tear up our great system of transportation, sink our ships on our inland seas and ocean traffic. This indeed would be a great disaster, but leave our great-hearted people, full of energy and enterprise, with souls full of the love of liberty, justice, and equity and they would repair the damages and on the ruins of the old, a new nation would arise with grander proportions, but destroy the love of justice, equity, and liberty of the people by the inordinate love of gain as practiced by the soulless trusts that are now being organized and our nation is blotted out and on its ruins will be established the worst form of oligarchy with all its attendant evils.

SHIP SUBSIDY.

The question of subsidizing our merchant marine has been before the National Grange at the two former sessions and fully considered, and the National Grange has expressed itself as emphatically opposed to all schemes of this character. The ship subsidy bill has failed at the two former sessions of Congress. The friends of the measure, however, have recently held a meeting and a bill was prepared differing in

some minor matters from the former measure before Congress. The bill as now formulated will be presented to the 57th Congress and vigorously pushed. Several members of the Senate who previously opposed the bill are not now members of the Senate. We understand that the bill will receive the support of some of the most influential members of the Senate and the House. The legislative committee of the National Grange in its address to Congress September 28, 1901, said:

"The principle involved in the ship subsidy bill before the last Congress has the unanimous opposition of the farmers of the country as expressed by the National Grange and by the masters of every State Grange in the land. We are in favor of the development of the American merchant marine and of manufacturing as we are in favor of the development of American agriculture, but no more in favor of contributing to a few wealthy ship-builders than we are of contributing to farmers or manufacturers. We have reasons founded on sound principles of statesmanship to oppose a scheme that contributes to the profits of the few at the expense of the many without adequate return. The tolling farmers of the land have developed American agriculture until its products constitute a majority of the exports of the country without government aid, and we understand that American steamships are already yielding their owners profits in transporting these and other products in all parts of the world without government subsidies. The farmers of the country ask for no special favors in legislation and oppose in the most vigorous manner such special favors to ship-builders and owners as are embodied in what is familiarly known as the ship subsidy bill."

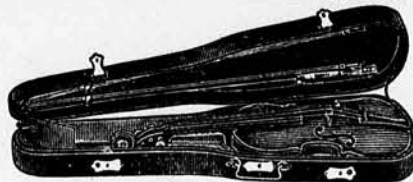
On account of the importance of this matter and the vast interest involved, the large aggregation of capital interested in and behind this measure, I desire to say in addition to what the committee has said: This is not the time, if ever there was a time to engage in subsidizing. France pays out annually \$1,160,000 on ship construction and \$2,400,000 on navigation, these vast sums being given to subsidize the merchant marine and yet the merchant marine of France is on the decline. Favorable conditions as now obtained in the United States are far more potent in building up a great merchant marine than subsidies. The development of commerce has become so vast that it has become sufficient stimulus to capital to extend as rapidly as necessity requires. There is nothing in the argument that there is not incentive enough in modern commerce to cause capital to enlarge facilities for carrying our freight to foreign nations. The increase of capital, the steady decline in the rate of interest, the tendency to aggregation of capital, the seeking of investments that promise reasonable profits, the activity of our ship yards, the investment of American capital in the purchase of British steamships and placing them under the American flag indicates that the business is attractive and profitable without subsidy.

Within the last year American capital has bought the Leland line, one of Great Britain's greatest shipping institutions and when consolidated with the Atlantic Transportation Line will make a steamship company with the largest tonnage in the world. The report of the Leland Line for 1900 says, among other things: "The purchase of the West Indian Pacific Steamship Company has been duly completed. The company now owns upwards of 99 per cent of the Wilson and the Furness Leland Lines. Steamers of the value of \$5,000,000 were recently added to the joint fleets. The directors declared a dividend of 6 per cent on ordinary shares and set aside \$1,850,000 to the account of the reserve funds." With this report and further evidence of the profitability of ocean transportation it would seem that no subsidy bill could be enacted by Congress, taking from agriculture and other industries and from labor to add to the wealth of the already profitable aggregation of capital. I can not view the effort to pass a subsidy bill through Congress at this time and under present conditions, in any other light than a disregard of all equity, fairness, and justice, and an unwarranted appropriation of public funds. I can not believe that any member of Congress can fail to recognize the changed conditions that the expansion of trade and the abundance of capital has brought about. Such an abuse of official position as voting for a ship subsidy bill of any kind at this time would be speedily rebuked by the American people. Ever watchful vigilance is the price of liberty and we trust every member of our order, every farmer in America will at once let their members of

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Congress know how they feel on this important matter.

CONCLUSION.

Patrons, this session closes my official term. I have given to the order my best thought and effort. The officers and the members of the National Grange and our vast membership in all parts of our country have cooperated and earnestly, faithfully, and harmoniously labored to advance the interest of the order and improve agricultural conditions in all parts of our country. Personally I have been treated kindly and courteously by all the members of the order and by the press. Our order has been shown distinguished consideration by the administration and all departments of our government, by State governments, as well as by our agricultural colleges, by the public press of our country, and by the people generally.

I have made many valuable, agreeable, and pleasant acquaintances in all parts of our country that I appreciate and prize very highly. I desire at this time to extend my hearty, grateful thanks to all the members of the order, to the public press, and to all others who in any way have contributed to the promotion of the order, or added to my personal pleasure and happiness. May our glorious fraternity continue to extend its benefits for good, to promote agricultural interest, building up good reputations and character personally and as an order to the end that our country may have a grander citizenship composed of intelligent, refined, honest, industrious, broad-minded, noble men and women.

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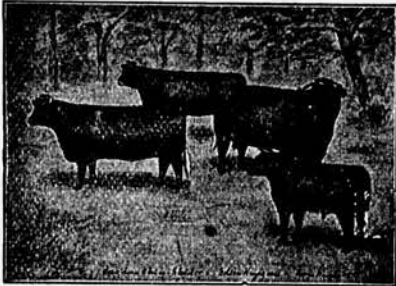
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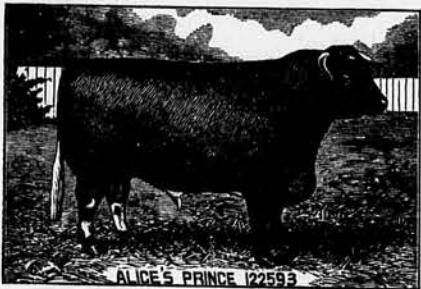
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FEMALES are the best Crulekshank families topped from the leading importations and American herds. These added to the long established herd of the "Casey Mixture," of my own breeding, and distinguished for INDIVIDUAL MERIT, constitute a breeding herd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

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Shorthorn Cattle.

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FEW BETTER CATTLE

Crulekshank's Booth Lancaster, and Double Marys represented, with preponderance of Crulekshanks.

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THE IMPORTED COW is the dam of Godoy, my chief stock bull, he by Imp. Spartan Hero, he by Barmpton. Godoy is closer to the greatest Sittyan sires than any living bull except his full twin brother. For Ready Sale—25 Bulls, 12 to 18 months old, and 40 Yearling Heifers to sell at drouth prices. Railroad Station, Tipton; main line Missouri Pacific; Vermont, Mo., on branch Missouri Pacific.



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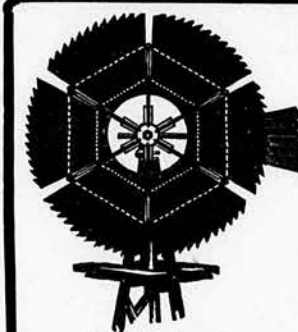
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