

KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, APRIL 25, 1901.

ESTABLISHED IN 1863.
\$1.00 A YEAR.

BREEDERS' DIRECTORY.

SWINE.

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

DUROCS. Registered stock all ages. M. H. ALBERTY, CHEROKEE, KANS.

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

MAPLE AVENUE HERD J. U. HOWE, WICHITA, KANSAS. Farm 2 miles west of city on Maple Avenue

DUROC-JERSEYS. CEDAR SUMMIT POLAND-CHINA SWINE FARM. Only choicest individuals reserved for breeding purposes. J. M. GILBERT, Busby, Elk County, Kansas.

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

PARKDALE STOCK AND FRUIT FARMS THOROUGHbred HEREFORD CATTLE. CHAS. A. SCHOLZ, Proprietor, FRANKFORT, KANS.

RIVERSIDE HERD OF POLAND-CHINA SWINE Commodore Dewey No. 46187 head of herd, assisted by a grandson of Missouri's Black Chief. Young stock for sale reasonable. All stock recorded free. M. O'BRIEN, Liberty, Kansas.

DUROC-JERSEY SWINE---REGISTERED. Some choice July, August and September males at reasonable prices, to make room for spring farrows. NEWTON BROS., Whiting, Kans.

POLAND-CHINA HOGS Herd headed by I Know Perfect 48263 O., sired by Chief I Know 37187 O. A few gilts for sale, also two 2-year-old sows that will be bred for August or September farrow and one 3-year-old sow by King Breckenridge. W. E. NICHOLS, Sedgwick, Kans.

D. L. BUTTON, North Topeka, Kans., Breeder of Improved Chester Whites. Stock for Sale. Farm is two miles northwest of Reform School.

MOUND VALLEY HERD OF POLAND-CHINAS Has shomo show gilts bred to I. B. Perfection (25172 S.). Others bred to Black U. S. Best (21767). Also a fine lot of fall pigs for sale. Prices reasonable. W. P. WIMMER & SON, Mound Valley, Kans.

Maple Grove Herd of Registered POLAND-CHINAS HIRAM SMITH, Colwich, Sedgwick Co., Kans.

Headed by the grand boars, Black Chief 42357, Ideal U. S. 48259, and assisted by Perfect I Am Vol. XXIII, grandson of Perfect I Know 19172, grandam the great sow Anderson's Model 43611, mated to a lot of choice selected sows of the most noted prize-winning families. A fine lot of fall pigs ready to ship. Inspection or correspondence invited.

...Prospect Park Herd of... **Thoroughbred Poland-China Hogs.** Perfect We Know, a son of Chief I Know, the sweepstakes boar at the Omaha Exposition, at head of herd.

J. H. TAYLOR, Telephone address Pearl, Kans. RHINEHART, Kansas. Telegraph address

SUNNYSIDE HERD OF PEDIGREED POLAND-CHINA HOGS.

We now have for sale 10 Good Young Boars 8 months old, and 8 Bred Gilts—fine, well developed sows, and a choice lot of September, October, and November, 1900, pigs for sale cheap. Write me for prices on what you want. M. L. SOMERS, Altoona, Kans.

R. S. COOK, Wichita, Kansas, Breeder of POLAND-CHINA SWINE.

The Prize-Winning Herd of the Great West. Seven prizes at the World's Fair. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 2441, Black Joe 25008, World Beater and King Hadley. FOR SALE—An extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly-bred sows. Inspection or correspondence invited.

SWINE.

J. D. MARSHALL, Walton, Kansas. For Sale: Thirty-five fine gilts, sired by "Miles Look Me Over" (18879) prize-winner in 5 fairs in 1900; also a few fine boars. Call on me or write your wants.

FAIRVIEW HERD DUROC-JERSEYS Contains breeders of the leading strains. We have some fine Summer and Fall pigs to sell at moderate prices. J. B. DAVIS, Fairview, Ka.

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

POLAND-CHINAS. Extra Good Fall Boars and Sows. Fancy Strains. DIETRICH & SPAULDING, Richmond, Kas

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

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

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

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

RIDGEVIEW FARM HERD OF Large English Berkshires Sold out of everything but fall pigs. Place your orders for them now. Silver Laced and White Wyandotte eggs for sale, \$1.50 per 15. MANWARING BROS., Lawrence, Kans.

Pure Bred Poland-Chinas

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

JNO. BOLLIN, Kickapoo, Leavenworth Co., Kans. Express Office, Leavenworth.

CATTLE.

ENGLISH RED POLLED CATTLE—Pure-bred young stock for sale. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo. Mention this paper when writing.

MEADOW BROOK SHORTHORNS—Some fine young stock, 20th Earl of Valley Grove at head of herd, for sale; breeding of the best, in color unexcelled. Address F. C. KINGSLEY, Dover, Shawnee County, Kans.

Breed the Horns Off by Using a RED POLLED BULL.

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

D. P. Norton's Shorthorns Dunlap, Morris County, Kansas.

Breeder of **SHORTHORN CATTLE.** Herd bull, Imported British Lion 133692. Young Stock For Sale.

REGISTERED HEREFORDS THOS. EVANS, Breeder,

HARTFORD, LYON COUNTY, - - - KANSAS. SPECIAL OFFERINGS: FOR SALE—Four yearling bulls, one imported 4-year-old bull, a few young cows and heifers.

CATTLE.

ROSEDALE HERD OF HOLSTEINS. O. F. STONE, Proprietor, PEABODY, KANSAS. Home of Empress Josephine 2d, champion cow of the world. Gerben's Mechtchilde Prince at head of herd. Young bulls and heifers for sale.

ALFALFA MEADOW STOCK FARM. 1,300 acres. Pure-bred stock only. Herefords, Poland-Chinas, Light Brahmas, and Belgian Hares. Stock of all kinds for sale. Pedigreed hares, \$2. O. B. WHITAKER, Proprietor, Shady Bend, Kans.

MAPLE LEAF HERD OF THOROUGHbred SHORTHORN CATTLE, AND POLAND-CHINA SWINE. JAMES A. WATKINS, Farm is 2 miles south of Rock Island depot. Whiting, Kans.

SHORTHORN BULLS FOR SALE. A few choicely bred young bulls—spring yearlings for sale at very reasonable prices; also 2 Shropshire, and 1 cross bred Shropshire-Cotswold buck. Address JAMES C. STONE, Leavenworth Kans.

RED POLLED CATTLE. Largest Herd in America. S. A. CONVERSE, Proprietor, Importer, and Breeder. OREGON, HOWARD COUNTY, IOWA.

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

ALLENDALE HERD OF ABERDEEN-ANGUS CATTLE.

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

RECORDED HEREFORD BULLS FOR SALE.

The get of Marmon 66646 and Anxiety Wilton A-46611, 10 to 24 months old. These bulls are large, and good individuals, and of the best of breeding. Inspection invited.

FRED COWMAN, Lost Springs, Kans. Breeder (not dealer) of Hereford Cattle.

CLOVER CLIFF FARM

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

125 **RAVENSWOOD SHORTHORNS** 125

C. E. LEONARD, - - BELLAIR, MO. Males and Females for Sale. Inspection especially invited. Lavender Viscount 124755, the champion bull of the National Show at Kansas City heads the herd. R. R. and Telephone Station, Bunceton, Mo. ED. PATERSON, Mgr.

IDLEWILD SHORTHORNS.

The blood of Roan Gauntlet and Champion of England can be had direct through our herd bull, Godoy 115675. His dam, Imp. Golden Thistle (Vol. 26) is by Roan Gauntlet; his grandam, Golden Lady by Champion of England. Godoy is still active and a sure getter. A few years later you can not get this blood direct. Godoy transmits the old scale and substance produced only by Cruickshank. Thirty-five Cruickshank females in herd; also Booths and Double Marys. Can offer Godoy calves from these tribes. W. F. HARNED, Vermont, Cooper Co., Mo.

CATTLE.

ROCKY HILL SHORTHORNS

We have for sale 7 Scotch-topped bulls, about 1 year old. Quality and prices right. J. F. TRUE & SON, Newman, Kansas. (Newman is on U. P. R. R., 12 miles east of Topeka.)

Polled Durhams! This little ad. will direct you to the largest as well as the best Scotch bred Polled Durham herd of cattle in the United States. 150 fine Duroc-Jersey pigs F. F. Fallor, Newton, Iowa.

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

TWO CRUICKSHANK-TOPPED SHORTHORN BULLS FOR SALE. Both reds; 8 and 9 months old. Also summer and fall farrow POLAND CHINA PIGS—both sexes. Prompt response to enquirers. O. E. Morse & Sons, Mound City, Kans.

H. N. HOLDEMAN, Girard, Crawford Co., Kan., BREEDER OF—

PERCHERON HORSES, and HOLSTEIN FRIESIAN CATTLE representing Josephine, Mechtchilde, and Farthena families. Poland-China hogs. Son of Missouri's Black Chief at head of herd. B. P. R., and B. L. H. chickens. Eggs in season, always guaranteed as represented.

Sycamore Springs Stock Farm

SHORTHORNS. H. M. HILL, Prop'r., La Fontaine, Kans. No Shorthorns for sale at present but will have a few young things in the spring. Personal inspection of our herd invited. Correspondence solicited.

SILVER CREEK HERD SHORTHORN CATTLE.

GWENDOLINE'S PRINCE 130913 in service, a son of the \$1,100 cow, Gwendoline 5th. Best Scotch, Bates, and American families represented. Also bred high-class Duroc-Jersey swine. Can ship on Santa Fe, Frisco, and Missouri Pacific R. R. J. F. STODDER, Burden, Cowley Co., Kans.

BLACK DIAMOND ...STOCK FARM

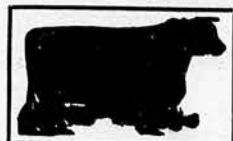
Has for sale a few choice Galloway bulls, sired by a World's Fair winner. Also, a few English Fox Terrier pups of finest quality. For Sale or Trade—A 15-acre, suburban property in Des Moines, Iowa. Information promptly furnished by the owner, J. R. Higgins, Reswick, Keokuk County, Iowa.

Sunflower Herd: Scotch, and Scotch-topped

SHORTHORN CATTLE POLAND-CHINA SWINE.

Herd bull, Sir Knight 124403. Herd boars, Black U. S. 2d 22682 S., and Sunflower Black Chief 23603. Representative stock for sale. Address ANDREW PRINGLE, Rural Route 2, Eskridge, Kansas.

PURE BATES SHORTHORNS.



M. W. ANDERSON, Independence, Mo Wild Eyes, Craggs, Peach Blossoms, Duchess Craggs, Harts, Barringtons, and Braolets. 166th Duke of Wildwood 134671 at head of herd. Can sell young females, bred or open.

CATTLE.

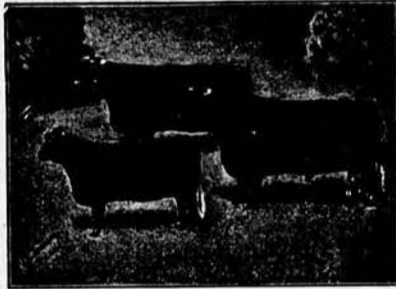
Polled Durham Cattle.
Edgewood Polled Durhams. The largest and best bred herd west of the Mississippi River. Scotch blood a specialty. Bulls for sale. Address A. E. BURLIGH, Knox City, Mo.

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Burlingame, Kansas,
.....BREEDER OF.....

**HEREFORD CATTLE,
BERKSHIRE SWINE,
COTSWOLD SHEEP.**
STOCK FOR SALE.

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

SHORTHORN CATTLE.
The herd numbers 185, headed by ROYAL CROWN 126698, a pure Cruickshank, assisted by Sharon Lavender 148002. For Sale just now 16 Bulls of serviceable age, and 12 Bull Calves. Farm 1 1/2 miles from town. Can ship on Mo. Pacific, E. I., or Santa Fe. Foundation stock selected from 1 of the great herds of Ohio.



GLENDALE SHORTHORNS, Ottawa, Kans
Leading Scotch, and Scotch-topped American families compose the herd, headed by the Cruickshank bull, Scotland's Charm 127264, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Twenty bulls for sale.
C. F. WOLFE & SON, PROPRIETORS.

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**PERCHERON HORSES, AND
ABERDEEN-ANGUS CATTLE**
GARRETT HURST, Breeder, Zyba, Sumner Co., Kans. For sale 1 young stallion, and 1 mare; also 8 cows, and 1 bull. All registered.

PERCHERON HORSES.
J. W. & J. O. Robison, Towanda, Kansas.
Importers and Breeders. Stallions for sale.
Send for Catalogue.

LIVE STOCK AUCTIONEERS.

JAS. W. SPARKS LIVE STOCK AUCTIONEER
Marshall, Mo.
Have been, and am now, booked for the best sales of high-class stock held in America. Write me before claiming dates.

R. E. EDMONSON (late of Lexington, Ky.) and Tattersalls (of Chicago, limited), now located at 208 Sheldley Building, Kansas City, Mo., offers his services as Live Stock Auctioneer. All the Herd and Stud books. Wire before fixing dates.

CAREY M. JONES,
Live Stock Auctioneer
Davenport, Iowa.—Have an extended acquaintance among stock breeders. Terms reasonable. Write before claiming date. Office, Hotel Downs.

LIVE STOCK AUCTIONEER



Col. J. W. Marshberger
LAWRENCE, KANS.
Special attention given to selling all kinds of pedigree stock, also large sales of graded stock. Terms reasonable. Correspondence solicited. Mention KANSAS FARMER.

FREE TO WEAK MEN.

Any man sending their name and address to W. E. Harter, 321 Ash St., Nevada, Mo., will receive absolutely free, full knowledge of how he cured himself of Lost Manhood, Nervous Debility and its associate diseases, after he had tried all sorts of medicines in a vain effort to be cured.

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THE LINCOLN IMPORTING HORSE COMPANY
LINCOLN, NEBRASKA.

We have fully decided to offer special inducements for the next twenty or thirty days on our Percheron and Shire Stallions. Some of the largest and grandest individuals that ever crossed the ocean.

Our Percherons are coal blacks. Our Shires are bays and chestnuts. All of them in the best of condition, healthy in every respect and sound as gold dollars. Parties coming to examine our stock and finding we have made any untrue statements, remember, we pay all expenses. Come at once and take advantage of first choice, and cut prices from 15 per cent to 25 per cent and some still more.

Opposite State Farm and Experimental Station. Take University Place or Havelock Street Cars. Inquire for Sullivan's Barns. Telephone 575.



Draft Stallions.
PERCHERONS, SHIRES, AND CLYDES.

Choicest collection of imported Black Percherons west of the Mississippi River. All horses personally selected by a member of the firm with the aid of our own private interpreter, and a first choice from the oldest and leading breeders of France. All fresh, young stock. If you want a Good Stallion we can suit you. Barns are in town. For further information, address

KEISER BROS., Keota, Iowa.

(On O. R. I. & P. Railway, 14 miles west of Washington.)

AMERICA'S LEADING HORSE IMPORTERS.



100 PERCHERON STALLIONS
40 FRENCH COACH STALLIONS

Now on hand. All mature and ready for service. Frequently there is a neighborhood in which there is no stallion men who will invest the price necessary to procure a first-class registered Stallion. In such a locality those farmers and breeders who wish to raise horses must resort to some means of procuring a good Stallion in their neighborhood. We have a plan that has proven most successful where the above conditions exist, and will furnish full explanation upon inquiry. If you live in such a neighborhood, write us and we will show you how you can procure one of the best stallions and raise horses that will sell for the highest prices.

McLAUGHLIN BROS.,
Sixth and Wesley Avenues, COLUMBUS, OHIO.

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

IMPORTED, and HOME BRED All Ages
POLLED DURHAM AND SHORTHORN CATTLE. POLAND-CHINA HOGS. Prices Right.

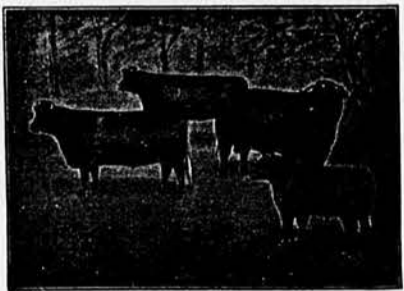
Snyder Bros., Winfield, Kans



ENGLISH SHIRE, and PERCHERON STALLIONS.

WATSON, WOODS BROS. & KELLY CO., Importers of DRAFT STALLIONS.
Lincoln, Neb. Three Importations made in 1900.

All our horses are personally selected by Mr. Watson, who buys only of the best breeders in Europe. Mr. Watson was the World's Fair Judge of Draft Stallions. Our December importation is the 25th shipment made direct from Europe by him. OUR STABLES are located corner Ninth and B Streets. Our office on the ground floor of the Burr Block TWELFTH AND O STREETS. We invite inspection. No trouble to SHOW HORSES. Visitors welcome.



PEARL SHORTHORNS.

HERD BULLS:
BARON URY 2d 124970. LAFITTE 119915

Inspection Invited.

C. W. TAYLOR, - - Pearl, Kansas.

SCOTT & MARCH,

.....BREEDERS OF PURE BRED.....

HEREFORDS,

BELTON, CASS COUNTY, MO.

BULLS in service. HESIOD 29th 06304; Imp. RODERICK 00156; MONITOR 04375; EXPANSION 03602; FRIBOBE 04874; FULTON ADAMS 11th 03761. HESIOD 29TH 06340.

Twenty-five miles south of Kansas City on Frisco, Fort Scott & Memphis and K. C., P. & G. Railroads

250 HIGH GRADE ANGORA DOES

All pure white, thin pendulant ears. Will sell very cheap if taken soon.

W. T. McINTIRE, Live Stock Exchange, - - Kansas City, Mo.

Norman Horses

SAMPSON No. 6866 is at the head of the stud. Present weight, 2,350 pounds, and for bone and quality he has no equal in this country.



We guarantee satisfaction and can undersell all competitors, as the purchaser pays but the actual producing price.

ALSO SHROPSHIRE SHEEP and POLAND-CHINA HOGS.
PINE RIDGE STOCK FARM. L. M. HARTLEY, Proprietor. SALEM, IOWA.

PURE PERCHERONS



The Richest Bred Herd in America,
—AND THE—
Oldest Breeding Establishment in the West

A limited number of choice young stallions for sale (including the herd stallion, Favorite 22937).

Correspondence Solicited. Inspection Invited.

HENRY AVERY & SON, WAKEFIELD KANS.

GEO. W. NULL, Odessa, Mo., LIVE STOCK AUCTIONEER.

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

COMBINATION SALE OF 126 ABERDEEN-ANGUS CATTLE

AT THE
FINE STOCK PAVILION, STOCK YARDS, KANSAS CITY, MO., MONDAY AND TUESDAY, APRIL 29-30

HALEY BROS., of Harris, Mo., in order to close a partnership, disperse their entire herd of 50 head, including the noted stock and show bull, Nabob of Lakeside A Novice, son of the celebrated Gay Blackbird; the show cow, Abbess of Estill 4th; Golden Flora, an International Exposition winner; Jennet's Favorite, a state fair winner; Lakeside Ardestie, a sister to Gay Lad, and 15 sons and daughters of the famous Blackbird Hero. This consignment affords an opportunity to secure a state fair show herd and grandly bred Coquettes, Ericas, Prides, Drumin Lucys, Easter Tulloch, Duchesses, and other good sorts.



W. S. KARNAGHAN, of Clarinda, Ia., contributes brothers and sisters in blood to the great prize-winner, Golden Flora, and her dam, and the best bred and most individually superior lot of Drumin Lucys offered since the Estill dispersion.

A. P. GROUT, of Winchester, Ill., sells herd headers from the illustrious Jilt, Blackbird, Pride, Erica, Queen Mother, and Heather Bloom Strains. They are "corkers."

S. MELVIN, of Greenfield, Ill., consigns the get of McHenry Blackbird 6th, and McHenry Pride 5th.

W. J. TURPIN, of Carrollton, Mo., sells chiefly from his noted Nosegay family.

JOHN HARVEY, of Bloomfield, Ia., sells the get of his stock bull, Gay Lad 2d, a brother to Gay Lad. TYSON & CO., of Redwood Falls, Minn., consign two grandly bred Pride bulls.

J. M. DUFF, of Chestnut, Ill., sells Ericas, Prides, Westertown Roses, and daughters of the splendid stock bull, Zaire 7th, and Leoneer.

There is not a cull in the entire offering and the average individual excellence is believed to be higher than that of any Angus auction held this season.

COL. F. M. WOODS,
COL. J. W. SPARKS,
COL. CAREY M. JONES,

Auctioneers.

For Catalogue,
address.....

W. C. MCGAVOCK, Mgr., Mt. Pulaski, Ill.

TEBO LAWN HERD SHORTHORNS

—HERD BULLS ARE—

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

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

H. M. WILLIAMS,
Manager.

G. M. CASEY, OWNER,
SHAWNEE MOUND, HENRY COUNTY, MO.



Sunny Slope Herefords.

290 HEAD FOR SALE

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

C. A. STANNARD, Emporia, Kansas

VALLEY GROVE SHORTHORNS.

THE SCOTCH BRED BULLS

Lord Mayor 112727, and
Laird of Linwood 127149
Head of the Herd.

LORD MAYOR was by the Baron Victor bull, Baron Lavender 2d, out of imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. Lord Mayor heifers bred to Laird of Linwood for sale. Also bred Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

T. P. BABST, Proprietor, Dover, Shawnee Co., Kans.

GALLOWAYS

Largest Herd of Registered Galloways in Kansas.

Young bulls, cows, and heifers for sale.

H. W. THRALL, Eureka, Kans.

GALLOWAYS.

LARGEST HERD OF REGISTERED GALLOWAYS IN THE WORLD.

Bulls and females, all ages for sale—no grades. Carload lots a specialty.

M. B. PLATT, Kansas City, Missouri.

Office at Platt's Barn, 1613 Genesee Street.



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INDEPENDENCE, MO.,

.....BREEDERS AND IMPORTERS OF.....

HEREFORDS.

One of the oldest and largest herds in America.

ANXIETY 4th blood and type prevail.

BOTH SEXES, IN LARGE OR SMALL LOTS ALWAYS FOR SALE.

T. K. TOMSON & SONS,

* * Proprietors of * *

ELDERLAWN HERD OF SHORTHORNS

DOVER, SHAWNEE COUNTY, KANSAS.

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



STEELE BROS., Belvoir, DOUGLAS COUNTY Kans

Breeders of SELECT

HEREFORD CATTLE

Young Stock For Sale. Inspection or Correspondence Invited.

50 Shorthorn Bulls For Sale.

THE BILL BROOK HERD OF REGISTERED SHORTHORNS

Have on hand for ready sale, 50 young bulls from 6 to 20 months old; also a few good heifers. Address H. O. TUDOR, Holton, Kansas.

Agricultural Matters.

Soil Inoculation for Leguminous Plants.

FROM FARMERS' BULLETIN NO. 124, U. S. DEPARTMENT OF AGRICULTURE.

Of the three elements going to make up the value of fertilizers, nitrogen is by far the most expensive. While this element is abundant in nature, forming four-fifths of the atmosphere, it is only under certain rare conditions that this uncombined nitrogen becomes available for plant growth. It has long been known that leguminous plants, such as clover, alfalfa, and cow-peas are unusually rich in nitrogen, and increase the nitrogen content of the soils on which they grow. This was not explained until science brought out the fact that this family of plants is able to obtain nitrogen from the air. It has been found that the power of securing free nitrogen exists only when small nodules or tubercles containing bacteria are found on the roots. It is now generally believed that these bacteria draw their nitrogen from the air and convert it into forms which can be utilized by the plants on which the nodules grow.

In growing these renovating crops for improving the soil it is important to know whether the nodules are formed upon the roots. If they are not there, the greater benefit from growing such crops is lost and the soil makes no actual gain in nitrogen. Where a crop like clover has been grown at intervals for a series of years, it is probable that the soil will contain the proper bacteria for forming tubercles. It has been found, however, that the bacteria growing upon the roots of one legume, as clover, may not grow upon the roots of another genus, as the cow-pea. Therefore, where the nodules are not formed, as is very probable with leguminous plants new to the section where planted, it is advisable in seeding the plants to also sow their proper inoculating bacteria. The absence of root tubercles will probably account for the reported failures of leguminous crops in many sections.

KANSAS EXPERIMENTS WITH SOY-BEANS.

A recent report states that the soy-bean has been grown at the Kansas station since 1890. Only recently, however, have tubercles formed upon the roots, and this was brought about by artificial means. Inoculated soil was obtained from a soy-bean field at the Massachusetts station, and by scattering it over the Kansas land, plants with tubercles were grown, producing an increased yield and a higher percentage of nitrogen. Several methods of inoculating were tried. The seeds were thoroughly wetted in a bag suspended in water, into which the Massachusetts soil had been stirred. Again, the dry soil was sown broadcast over the fields, and in other cases was drilled with the seed. The best results were obtained by sowing inoculated soil in the drills. The method of securing inoculated soil and of inoculating a field is described as follows: In a 500-foot row incorporate 100 pounds of inoculated soil with the seed at the time of sowing. After harvesting the crop take up the soil in the row to a depth of 4 to 5 inches, spread on boards in the shade until dry, and sack. When planting a field to soy-beans apply this soil with the seed by means of a fertilizer attachment to the grain drill.

A PATENT MEDICINE FOR THE SOIL.

The Alabama station has experimented with commercial inoculating material (Nitragin) and inoculated soil on a variety of crops, but especially with hairy vetch and crimson clover as winter-cover crops. It was found that while vetch and clover during the first year developed only a few tubercles on the station soil and made poor growth or failed entirely, they were after a few years of continuous growth abundantly supplied with them and made good growth. However, it would seem hardly profitable to wait for the slow action of natural inoculation when the desired result can be easily and quickly accomplished by artificial means. Where there is a small patch of clover, vetch, or peas, bearing root nodules, a field of a similar crop may be readily inoculated by using soil from the former. At the Alabama station the crops were inoculated by applying soil from old fields and by dipping the seed previous to sowing in water into which had been stirred soil from an old garden. Artificial cultures (Nitragin) were also used, but their cost, together with lia-

bility to deteriorate, are believed to preclude their use in general farm practice.

INCREASED YIELD.

In the experiments with hairy vetch grown on a soil for the first time, one lot of seed was dipped into a water solution of earth from an old garden spot where vetch had grown, and another was sown without treatment. The inoculated plants had large clusters of tubercles on the roots and produced 2,540 pounds of cured hay per acre. The uninoculated plants had no tubercles on the roots and produced 232 pounds per acre. The soil of the inoculated plots besides producing the larger crop, was left in much better mechanical condition. In a crop of crimson clover, seed inoculated with Nitragin produced an average of 4,057 pounds; not inoculated, 761 pounds per acre. Not only was the total amount of forage increased in the above instances, but there was a larger percentage of nitrogen in the inoculated plants. The total amounts of nitrogen contained per acre in the crops were as follows: Hairy vetch—inoculated, 105.5 pounds, not inoculated, 7 pounds. Crimson clover—inoculated, 143.7 pounds; not inoculated, 4.3 pounds.

In earlier experiments at this station the average increase in weight of the inoculated plants, after thorough drying, was with hairy vetch, 89 per cent; Canada field peas, 138 per cent; crimson clover (young plants), 146 per cent. In a soil which had not borne leguminous plants for many years, some tubercles developed on hairy vetch, Canada field peas, crimson clover, lupines, cow-peas, and Japan clover. Yet, even on this soil the increase in weight of plants by inoculation was with hairy vetch 38 per cent; Canada field peas, 58 per cent; and crimson clover, 79 per cent.

In experiments with hairy vetch at the Mississippi station the yield was increased 64.6 per cent by scattering inoculated soil in the drills with the seed, and 34 per cent by soaking the seed in water containing the tubercle germs. The amount of nitrogen was also considerably increased by inoculation. The inoculated soil used was obtained from a field bearing hairy vetch which had an abundance of nodules.

METHODS OF INOCULATING THE SOIL.

As regards methods of inoculation, the Mississippi station makes the following statements:

There are at least three methods of inoculating soil with these germs. One method is to find a field on which a crop of vetch, peas, or clover has grown, on the roots of which an abundance of nodules was developed. In such a case one may be sure that the soil of the old vetch or clover field is full of germs that escaped from the nodules when they decayed. They draw dirt from this field, about 1 ton to the acre, and scatter as evenly as possible over the one to be inoculated. It should then be quickly harrowed in, especially if it is a hot, clear day, because sunshine kills the germs. The dirt should be taken preferably from 2 to 3 inches below the surface. A second method is to obtain some earth from an old inoculated vetch or clover field, put it in a vessel, and pour water on it. Then stir thoroughly, allow it to settle, and use this water to thoroughly wet the seeds to be sown. The water thus obtained is full of germs from the soil, which will stick to the seeds as they dry. Here again we should use care and not dry the seeds in the sunlight. This [seems to be] the most economical way of inoculating a field. It is not a difficult matter to spread out a bushel or two of clover or vetch seed on an old or tight floor, and sprinkle with plenty of the muddy germ water. The seeds may be left right there until they dry, if they are in the shade, and then are ready to sow. A third method is to buy a material known as Nitragin. This is simply a gelatinous substance full of the germs one wishes to use. It is made in Germany, and consequently in the trip across the ocean and then to us, it is liable to ferment and spoil.

Even if the Nitragin can be obtained in good condition its cost renders its use of doubtful economy, as already stated.

In using inoculated soil it should be borne in mind that while experiments have shown that the germs from one plant will inoculate very closely related plants and even in some cases those distantly related, the best results will probably be obtained by using germs from the same species of plant as that which it is proposed to inoculate.

It is important to bear in mind that soil inoculation for leguminous plants is most valuable for poor soils deficient in nitrogen, and is not likely to prove

profitable on soils abundantly supplied with available nitrogen. In experiments at the North Dakota station with peas and red clover grown on pure sand and on a garden soil rich in nitrogen it was found that inoculation with Nitragin resulted in a largely increased yield in case of the sand, but produced little increase on the garden soil.

A Floating Exposition Suggested.

O. P. AUSTIN, CHIEF OF THE BUREAU OF STATISTICS, U. S. TREASURY DEPARTMENT, IN GEOGRAPHIC MAGAZINE.

A floating exposition, carrying samples of our merchandise around the world and putting our merchants in touch with those of all nations, seems to me a fitting American enterprise for the beginning of the new century. The nineteenth century has made the United States the greatest exporting nation of the world; why not begin the twentieth by showing to all the world what we have to sell and how to sell it? Exhibitions of the products of industry have proven beneficial to trade wherever undertaken, whether the ancient "fair" or the more modern "exposition." The traveling salesman with his sample cases has become a necessity of modern mercantile success; "commercial museums" exhibit to the dealers of one country the class of goods required in other lands, and the great European nations now send out "commercial missions" to inquire into and report upon the trade opportunities in distant countries.

But each of these methods has its limit of influence. The fair or exposition is dependent for its success upon the number of people it can attract to its doors, the traveling salesman represents but a single establishment or industry, the commercial museum conveys its information only to the seller and not the buyer, and the commercial mission gathers information regarding the wants of distant people, but is unable to offer them samples of the goods which its own people have to meet those wants.

Why not combine the valuable features of these various aids to commerce in a single great enterprise—a "floating exposition," which shall carry samples of our merchandise to the very doors of the people whose trade we would foster, and by bringing the buyer and seller into personal contact establish such mutual understanding of wants and conditions as to facilitate the interchange of which each is desirous.

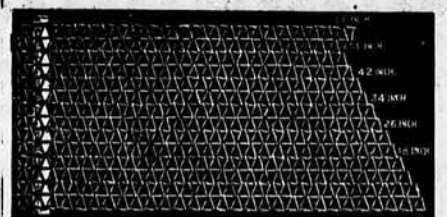
The imports of Asia, Oceania, Africa, and the American countries south of the United States amount to over two billion dollars every year. Nearly all of these importations are of the very class of goods which we want to machinery, and manufactures of all kinds; yet our sales to these grand divisions in the best year of our commerce, 1900, only amounted to about \$200,000,000, or 10 per cent of their purchases. The annual imports of Asia and Oceania are over a billion dollars, those of Africa over four hundred millions, and those of the countries lying south of the United States about six hundred millions.

Most of the cities through which these two billions dollars' worth of goods are first distributed lie on the seacoast, and could be easily reached by a fleet of vessels loaded with samples of American products and manufactures. It is well known that the lack of practical knowledge as to the local trade requirements, such as methods of packing, kind of goods required, length of credit, etc., is the chief obstacle to the introduction of American goods in these countries, and that until this obstacle shall have been overcome we can not expect to obtain the share in that trade to which our location and facilities of production and manufacture entitle us.

If a floating exposition were systematically organized, loading one vessel with exhibits of foodstuffs, another with textiles, another with agricultural implements and vehicles, another with manufactures of iron and steel, another with household requirements, and another with "Yankee notions," and sent from port to port and continent to continent, it should prove highly advantageous to our commercial relations with all of the countries visited.

Every manufacturer or exporter sending an exhibit would naturally send with it a capable representative, who could discuss with the local merchant the qualities of his goods and their fitness or unfitness for local markets.

The coming of an exhibition of this character would attract at each port not only the business men of that city, but those of other commercial centers in the vicinity, and by this process the wholesale merchant of the United



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fenced with them this year. The fences that grow more popular every season. Real saving, service and satisfaction in
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Fully guaranteed. Best steel and galvanizing. If you can't find our local agent write to American Steel & Wire Co., Chicago or New York.

States would speak face to face with those of every country visited, and in these discussions would learn in a practical way the obstacles which now prevent a free interchange of commerce and the methods by which they can be overcome.

In addition to this, a corps of experts could gather samples of the goods now being sold in the countries visited, the prices obtained, the length of credit given, the banking and exchange facilities existing and required, and other facts which would prove valuable not only to those directly participating in the enterprise, but to all manufacturers and merchants of the United States, by their exhibition in commercial museums and by published reports.

Present conditions seem to be exceptionally favorable. The producers, manufacturers, and merchants of the United States are greatly interested in the extension of markets for American goods, and the Bureau of Statistics is daily besieged with inquiries for information bearing upon this subject. The past three years have been exceptionally successful, and yet have shown the necessity of finding an increased outlet for the surplus which the American manufacturers show themselves capable of producing, and it seems not unreasonable to believe that they would look upon a reasonable expenditure for the extension of trade as money well invested. A great world's fair has just been held at Paris, at which many Americans made exhibits, some parts of which would be suited to a floating exposition such as has been suggested. A great exposition, especially intended to apply to the people of Central and South America, is to be held at Buffalo this year, and its exhibits would in many cases prove a basis for an undertaking of this kind, while another exposition, especially relating to the West Indian trade, is to be held at Charleston. Thus, in the disposition to extend our commerce, in a prosperity which warrants new business ventures, and even in the partial preparation of exhibits, the circumstances appear to be especially favorable.

Alfalfa in Eastern Kansas.

EDITOR KANSAS FARMER:—There is no danger of threshing over old straw by saying too much about alfalfa. More than one million dollars is lost every year in eastern Kansas by the farmers not having it. It is just as easy for all farmers in this part to raise plenty of it as falling off a log. It is the easiest to get a stand of any grass I know, when one knows how. I was a long time learning the know how part, and the school I went to was very expensive, and the schooling I got was all wrong—results, blasted hopes, money and time wasted. This was all because I had not sown at the right time in the moon but at the wrong season of the year. Any one in this part of Kansas may succeed, who will sow in August or early part of September after wheat, oats, millet, or early potatoes. Prepare your land well by plowing under all trash. Get a good seed bed and sow with a drill 20 pounds to the acre. If it is not a terribly dry fall so the seed won't come up, I will for 5 cents an acre, guaranteed a stand. Disking in won't do. The seed will come up all right, but in disking more or less trash and stubble can not be covered. This will afford a roosting place for grasshoppers, and they will utterly eat up the young plants. But after it gets a start the 'hoppers like something else better. After the alfalfa winters over, all is safe. Weeds will never after bother if it is a good stand. If sown in the spring it usually comes up all right, but by fall it is all gone. It is not the weeds that kill it, but the crab grass, and the more you mow it to kill

TO CURE A COLD IN ONE DAY
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If You Have Rheumatism;
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the crab grass the more the grab grass will laugh at you for mowing. It is just what it wants you to do. It flourishes then and sends out feelers until the crab grass has the alfalfa completely choked out.

If you have a horse that is not doing just right, good alfalfa hay is the best condition powder in the world. Good alfalfa hay and a little corn will fatten a horse quicker than anything I ever tried. Some claim the hay is not good for horses, especially work horses. They simply don't know what they are talking about, or they have been feeding poor hay, or they do not know how to feed it. It is the best calf and cattle feed I ever saw, and when it comes to brood sows it is par excellence, a perfect balanced ration with corn. No slop is needed to keep them loose, and the pigs, shoats, and fattening hogs thrive and grow with the hay in connection with their other feed. It is boss.

M. F. TATMAN.
Rossville, Kans.

Grain Trust Scored.

EDITOR KANSAS FARMER:—I have been thinking some and have been in position to gain some knowledge concerning the working of the grain trust and the grain business, and I want to state a few facts.

Our grain-dealers charge us from three to six cents per bushel for handling our wheat, or just as much as we will stand without making too hard a kick. It is more in the busy harvest season when we can not get cars and a machine at the same time and must sell to pay expenses, and less at a season when we can chip in together and ship if they don't pay something near what it is worth.

WHERE THE PROFIT LIES.

Last year my father, brother and I raised 6,000 bushels of wheat. We have shipped wheat a number of times and know just what it costs. Some of last year's crop we sold direct from the machine and paid the regular grain-dealer's five, six, and in some cases as high as eight cents per bushel for handling it. How do you suppose I felt as I drove on the scales knowing that I was paying from \$2.50 to \$4.00 every time I did so? Imagine, and you will know why I write.

We may be making money in the wheat business, but we have none to throw at the dogs. Five cents per bushel is not much. It is just \$2.50 per load, \$10 on four loads, or \$300 on 6,000 bushels. Three hundred dollars isn't much. Just a salary of \$25 per month for a year for the dealer, or about enough to pay for the threshing, which took 16 men, 9 teams, and a 12-horse power engine and thresher two weeks.

A dollar saved is a dollar made. It costs just so much to raise wheat and put it in the wagon, threshed. The profit is in the last ten or fifteen cents per bushel. If it costs you forty cents per bushel and you sell for fifty cents you make ten cents. If you sell at sixty cents you make just double. If you must give the grain dealer from five to eight cents per bushel, you will be dividing the profit evenly with him, or, in other words, you will work a year and give him half your salary for doing a little business which takes him about seventy-five minutes.

TESTER AND SCALES.

And then the tester used is a delicate piece of machinery. A man with a file can "fix" one in less than a minute. I am acquainted with parties who have had their wheat tested by the grain trust agent. It was pronounced 57 pounds, grade No. 3. The same wheat was shipped to Kansas City and tested 59½ pounds, grade No. 2.

The scales are also another factor to take into consideration. The 2,000 pounds weights are used only in weighing loads and the 1,000 pound in weighing the wagon. The wagon must be weighed correctly for every farmer knows about what his wagon weighs. But the load is different. I know of one pair of scales that had the 2,000 pound weight "fixed." On its under side was a leaden plug so arranged that it could be removed and replaced at will. When the plug was out it made 80 pounds difference.

THE INDIVIDUAL SHIPPER.

And now a few words about single individuals shipping at a season when they can. Sometimes it will pay and sometimes it won't. There is a party living in this vicinity who shipped a car of wheat to Kansas City. It was nice bright No. 2 wheat and dry. On the road somewhere between here and Kansas City it was run under a water tank or in some other way made thoroughly wet. In Kansas City it was pronounced hot, mouldy, and well nigh worthless.

The party took the matter to law and secured a partial recompense but lost several hundred dollars.

COMMISSIONS WITHOUT HANDLING.

Further, when we speak of shipping our own grain we have had grain-dealers who would say "go ahead if you want to. I won't make quite so much but I can sit in my office and draw a commission on it just the same." I don't know whether the statement is so or not. I never belonged to the grain trust. I have no reason to believe that it is not so. If so, it is nothing more nor less than highway robbery. When a combine can fix up a scheme so that one man steals from another in a manner like that and boasts of it, it is high time that something be done.

IN THE WRITER'S VICINITY.

The above partial history or outline of the workings of the grain trust in this vicinity for the past few years is gospel truth and I can furnish the names and particulars to any farmer wishing them. What do you think of it, fellow grain-growers? Do you think we should patronize any such a conglomeration of heterogeneous schemers and fakirs?

Such is the working of the trust in this community. From reports I have other communities are fully as bad. The past is written and I have no reason to believe that the future will be better unless compelled to. Of course it will be in order for the agents of the grain trust to pat us on the back and tell us now that we are nice fellows and they will handle our wheat on a two cent margin.

Mark my words. Wait until harvest comes. They will forget it all. I can cite you to a man who contracted his wheat to an agent of the grain trust at a certain price, a machine was secured and the grain hauled for delivery. The grain trust agent backed out. He said he could not come out on it. A nice trick.

Farmers, don't contract your grain to the agents of the grain trust. At any rate do not do so until after the grain growers' meeting at Salina, May 16.

FARMERS POSSESS THE WEALTH.

The farmers possess the wealth of this vicinity, viz: wheat. Should any merchant or other person who serves the public in any way attempt to interfere with any movement gotten up solely in behalf of and for the persons who own the wealth of a country they are extremely liable to get into trouble and will doubtless soon conclude that they had better engage in some other business or profession.

TO CONTINUE A WHEAT COUNTRY.

This vicinity is a wheat country and the chief business of the country in the future will be wheat growing with stock-raising as an accompaniment. I believe it because I have a record of the precipitation at Downs for the past twenty years, at Smith Center for the past six years, and I have kept it myself for the past few years. It is greatest in the spring. The average at Downs for twenty years for April, May and June, the wheat growing months, expressed in inches is 2.48, 3.62 and 4.03, respectively, which is sufficient with spring temperature for wheat growing.

While in July it is hot and dry which makes it nice for cutting and threshing but impossible for corn to do well. For september and October the precipitation is 2.08 and 1.77 inches which is sufficient to germinate the wheat and start it off in good shape provided the ground is properly prepared. Experience has proved these things.

There never was a time when there was a larger acreage sown or conditions more favorable. Now is the opportunity of a life time. We should not let it pass unimproved. I have talked with over two dozen farmers. All agree that the workings of the grain trust are a scandal, an outrage, and that it is a swindling institution, and that grain growers' cooperative associations should be formed all over the wheat belt of Kansas, but some were in doubt as to whether a constitution could be drawn up that would bind them together successfully.

HOLD TOGETHER.

Let me ask you a question. If a constitution can be drawn up that will hold together successfully a nation of 44 States whose interests are as widely separated and whose population is 75,000,000, composed of persons of all classes and nations as is the United States, for a period of one hundred and twenty-five years, does it look visionary or unreasonable to suppose that one can be drawn up that will hold together successfully a company of 75 to 100

U S U S U S

The Improved United States Separator

as it appears on the market to-day is the result of years of study and experiment. While we do not claim it is perfect, although many users say it is, as near perfection as possible, yet we do claim that it is unequalled by any other make on the market. This claim is based upon its work at Experiment Stations and in Dairies and Creameries the country over, where it has demonstrated many times that it

Does more exhaustive skimming, therefore Saves Cream ;
Has greater capacity according to price, therefore Saves Time ;
Requires less power to run and less time to clean, therefore Saves Labor ;
Has greater simplicity and durability, therefore Saves Expense.

In fact it has so many times proved in competition with other makes its overwhelming superiority as to make good its right to be known as

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If you will follow the advice of its users you will investigate its merits before buying some other make said to be "just as good." Remember there are none such.

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VERMONT FARM MACHINE CO., Bellows Falls, Vt.

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U S U S U S

grain growers living within an eight mile square and whose interests are mutual? The cost of building an elevator would not be much when divided among 75 or 100 persons.

Grain growers' cooperative organizations should be formed in all localities over the wheat belt. Each should have a binding constitution and be incorporated under the laws of the State of Kansas. The necessary officers would be a general manager, a board of five trustees, two auditors, and a secretary. The bank should be the treasurer. At first I thought the officers should remain in office permanently as persons would want to know who was to have charge of their money before investing, but on giving the matter deeper study I believe that all officers should be chosen annually and provisions should be made for removing them at any time if desirable.

The manager should handle considerable of the company's money, which would be borrowed in the name of the company for doing business, for which he should give bond. The company should not buy, but should handle grain on a commission. It could be done for 1½ cents per bushel, of which the manager should receive a part and the company a part and should be based on Kansas City weights.

The wheat should be weighed, tested and graded as received and the different grades kept separate. Money should be advanced upon it as soon as received up to within 15 cents per bushel of Kansas City markets on all standard grades and the balance paid as soon as returns are obtainable. Persons shipping with the company should be shown the returns and correspondence concerning their wheat. The contract for the product of a sufficient number of acres of wheat to make the elevator a paying investment should be secured before building. The amount of stock owned by one person should be limited and no person should ever be allowed more than one vote.

Each member or contractor should sign and agree to the constitution. I have mentioned some of the things that should be mentioned in the constitution. There are others which I can not mention here.

DO SOME FIGURING.

Fellow grain growers, do a little figuring of your own. You have out 100 acres of wheat more or less. It looks nice. You will likely bind and thresh from the shock. As a rule the price is better at early harvest time. At any

rate you have not bin room for more than half of it. The other half you will sell direct from the machine.

Figure what you would pay the trusts on 50 acres at 20 bushels per acre and five cents per bushel. Figure out how much you could afford to invest in a company gotten up on a sound basis and incorporated under the laws of the State of Kansas that would handle it for 1½ cents per bushel.

Do this as soon as you read this. Don't put it off. It won't take you more than an hour. It will pay. There is a call for a State grain growers' meeting at Salina on May 16. If successful a commission house will be established in Kansas City for transacting the business of the cooperative grain growers' elevators and farmers wishing to sell independently of the trusts.

The farmers in the vicinity of Solomon, Salina, Abilene and McPherson are now organizing, others are preparing to join soon.

Shall we submit to the heavy tolling of the trust? What do you think about it?
 R. M. HAMMOND.

Portis, Kans.

Her Wedding "Tower."

An accommodation train on a distant railroad was dragging along, when a long, lean and sallow woman, in what appeared to be subdued bridal finery, leaned across the aisle of the car and said seriously to a lady sitting opposite her:

"Dear me! It's a kind of solemn thing to be travelin' with two husbands, now, ain't it?"

"I do not know what you mean," replied the lady.

"Oh, mebbe not. Well, you see, my first husband died 'bout a year ago an' was buried over in Patrick County, an' last week I was married ag'in an' me an' me second husband have been over in Patrick County on a little weddin' tower, an' I thought I'd kind of like to have my first husband buried in the graveyard nigh where I'm goin' to live now, and my second husband was willin', so we tuk me first husband up, an' he's in the baggage car along with our other things. My second husband is settin' out on the platform takin' a smoke, and I been settin' here thinkin' how solemn it is to go on a weddin' tower with two husbands. It's a turrible solemn piece of bizness when you come to think of it."—Lippincott's Magazine.

Don't forget to look up our "Block of Two" offer.

The World's Wheat Crops.

	1896	1897	1898	1899	1900
North America.....	491,048,000	595,951,000	752,092,000	619,264,000	581,772,000
South America.....	57,492,000	39,510,000	66,603,000	125,146,000	120,157,000
Europe.....	1,509,066,000	1,157,169,000	1,603,960,000	1,522,020,000	1,476,142,000
Asia.....	379,320,000	375,088,000	436,178,000	403,290,000	312,982,000
Africa.....	43,488,000	39,091,000	48,626,000	42,373,000	45,400,000
Australasia.....	25,906,000	27,652,000	34,980,000	56,202,000	50,111,000
Total.....	2,506,320,000	2,234,461,000	2,942,439,000	2,768,295,000	2,586,564,000

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.
October 8-10, 1901—American Berkshire Association Sale at Kansas City.
December 10, 11, and 12, 1901—Armour-Funkhouser, Herefords, Kansas City.
December 13, 1901—H. C. Duncan, Shorthorns, Kansas City.

Modification in Swine Production.

PROF. THOMAS SHAW, UNIVERSITY OF MINNESOTA.

Should there be any modification in our methods of swine production in the United States or in any part of it? This question has come to us and face it we must. It has come to us because of that almost silent change, yet no less potent because silent, that has been going on in those countries which are the best customers for our pork. The change referred to, is the demand for meat, leaner and more streaked than was usually furnished for the market long ago. It can scarcely be said that this demand is yet pronounced in our own market, but, so certainly does it appear to the writer that it is coming that those should be looked upon as wise who prepare for it now, by lengthening the side of the swine which they grow by putting under them better feet, and by so modifying the methods of feeding that the finish product will have more lean and less fat relatively on the carcass.

POPULAR TASTE.

The reasons for this expectation rests chiefly upon the fact that popular taste raises its standard in food products with the advancement of the people in material and intellectual acquirements. Years ago the fat hog in England was very much in demand because the artisan could not afford to buy good butter as he can now. The wages paid to him would not admit of his doing so. His pork furnished him with a large proportion of his butter or at least what was made a substitute for it. Now that he earns more money he can afford to pay for a better product in a line of consumption, hence he can buy butter for its own sake and in consequence demands a quality of pork more suited to his taste. That the same transformation of taste is going on in the United States is evident to the writer, hence the growing demand for pork leaner and of the light weight type, and with further change in the same direction in the countries which consume our surplus pork, the necessity will exist to meet the tastes of consumers as far as it may be profitably done. So convinced am I of the trend in popular taste in this direction, that I want to be put on record as cherishing such a view and as having thus early urged the farmers to modify the form of pig which they grow.

WHAT THE HOG SHOULD BE.

My contention is, first, that the short-bodied, broad, short-limbed, breeds of swine would be given more of relative length, and less of relative width, that they should be given more of length and strength of limb, and that they should not be fattened so excessively when preparing them for market; and second, that it will pay better to grow such types, than to grow the types most in favor in the corn belt at the present time.

THE FATHERS.

But, says some one, is that not going backward in the line of improvement? Have not our fathers for the last fifty years been shortening and broadening and smoothening our pigs with a view to make a meat product with the least possible waste in it and that can be made at the least possible expenditure of food? And now you come along and urge our farmers to begin and undo all that. Wait a minute. While it is true that our fathers have accomplished what they set out to do in all these directions, have they stopped at the right terminal. I answer no. Tell me, brother farmer, is the shortest-bodied, shortest-limbed and smoothest pig always the easiest feeder and the most profitable animal? With all the power of my being I answer no. There is a limit in the shortening of the body, in the smoothening of the same, and in refining and reducing the length or the limbs which can not be passed without inducing delicacy and impairing relative powers of growth. The digestive powers snare in this declination of vigor, hence they can't give the relative return for food that a stronger though less refined animal will give. I claim that many swine breeders in the corn belt, especially, have passed this limit. The breeders of Berkshires have dis-

covered this fact. The writer noticed when in Chicago that Berkshire breeders who priced their long-bodied sows at \$100 would sell an equally well formed sow but with a shorter body for \$75. May the breeders of Poland-Chinas and Duroc and of other breeds do likewise, even though the standards may have to be modified to enable them to do so.

IT WILL PAY.

The contention that it will pay to make such a change is based upon the following reasons, among others that may be given: First, the over-refined animal is more delicate than the animal not excessively refined. That those breeds which prevail most in the corn belt are more delicate than the breeds possessed of the furnishings recommended, can not be denied. It is a fact that when hog cholera wants a herd of swine of the bacon breeds, they do not so readily fall a prey to it as swine of the over-compact types. From no one source has the American swine grower suffered so much loss as from hog cholera, and this loss would undoubtedly have been lessened by millions and millions of dollars in the aggregate had swine that were more of the bacon type been grown. Second, the prevailing types are less prolific than those of the longer bodied animal. While litters with the former which reach the weaning period do not average probably more than five or six, those from the more rangy type will average not less than eight to nine at the corresponding period and the larger litters will be recorded the better of the two, owing to the inseparable relation that obtains between free production in breeding and abundant milk production. The bearing which this question has upon profits must be patent to all. Third, the animal with the form recommended will grow more rapidly than the animal with the over-refined form. It will do so because of its greater inherent vigor. The barrows from the Minnesota station that won first at the great Chicago show when shown against the continent were pigs of this type. They were a cross of Large Improved Yorkshire and Tamworth respectively upon Poland-Chinas. For the age they were the largest pigs exhibited; and fourth, the weights called for by the demand for this less over-fed pork are lighter than those called for by pork of the other type. The carcass wanted would not exceed 225 pounds, and everybody knows that 225 pounds of pork may be made relatively more cheaply in the same animal than 325 pounds.

It will be apparent to the reader that to the man who holds these views but one course is open, if he is at all actuated by the desire to promote the public welfare, and that is to earnestly ask the farmers who are growing pork to look into this question. If the above views are incorrect, they are pernicious, and to prevent them from doing harm they ought to be refuted. If they are correct they ought to be heeded. They bear on a tremendously important question. But before looking into this question let every man lay away his glasses of prejudice. Wiping will do no good. They must be laid aside.

Corn for Horses.

Jacob Haynes boasts of being the possessor of a horse that is now 37 years old, and eats 21 ears of corn each day.—Adelphi, Ohio, Border News.

How about a balanced ration?—E. B. Answer:—This is certainly a horse of wonderful constitution, besides having a splendid digestion. The fact of his eating 21 ears of corn daily simply shows first, that he is a horse whose stomach will accept corn as food, in short corn agrees with his digestion, while the next 30 horses on an average it will not agree with. The fact of this horse eating 21 ears of corn daily does not prove, however, that he digests it by any means. Right here is a lesson that many fail to comprehend, namely, the difference in the feeding of corn whole and corn ground into meal. When fed whole to either a horse or a steer the animal simply crushes it in the mouth. This enables the gastric juice to get at the protein in the grain, which is all in the chit of the kernel and in the shell of the grain or coating next to the skin or bran. The starch remains in an indigestible form quite largely and passes through the animal for the pigs or hens to root or peck out of the voidings and get fat upon. This accounts for the reason why a western colt or steer will grow fat on corn when fed in this way and get large sized but a weak, spongy bone. When the same corn is ground into meal the digestion of many animals can't furnish gastric juice to soften the starch cells

and acute gastritis follows, or if trouble of this kind does not follow, the colt or steer grows up a fat little fellow with small size and fine bone which is easily broken, simply produced by the way the corn was taken into the stomach. The chances are 10 to 1 if Mr. Haynes would grind his corn into meal and feed it to this horse he would be sick in less than a month, as his stomach could not stand the starch when made fine by grinding. The starch he is largely wasting when feeding the corn thus to his horse, yet he is saving the life of the horse by feeding the corn whole, as the animal is thus enabled to get the protein out of it and let the starch pass through him. It does by no means prove that corn is a balanced ration, nor a safe, economical feed to use as a single food for all horses. The western farmer can feed corn in the ear to his colts and steers and grow them and let the hogs follow them and fatten on what passes through them undigested and may get pay for his corn in the hog, but he can not in steer nor colt alone. With the steer it is all right, but with the colt fed largely on corn the man who buys him for a worker or driver finds he has an animal of little value when physical endurance is required. His bone is weak and spongy, liable to blemish on slight provocation, he goes lame from slight sprains because his muscles lack tone. In short isn't much of a horse, although a good looker when brought to eastern markets. The corn-fed colt or horse is given the go-by or sold at from 15 to 30 per cent below the prices of horses that have been differently fed in youth. "One swallow doesn't make a summer."
—C. D. S., in National Stockman and Farmer.

The Discussion on Tuberculosis—Part IV.—Should Breeders Apply the Tuberculin Test?

PROF. THOS. SHAW, UNIVERSITY OF MINNESOTA.

At the present time there is no mistaking the attitude of breeders toward the tuberculin test. As noticed in a previous paper, that attitude is decidedly hostile, as indicated by the trend of public sentiment as expressed in the agricultural press and in the resolutions



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passed by many live stock associations with reference to the question. It has also been indicated in another way, in a sense which may be looked upon as negative. No breeder, so far as known to the writer, has ever tried commercially to profit by the existence of the tuberculin test, that is to say, no one has had his herd tested from time to time and has then advertised the fact with a view to increase sales and enhance the value of his animals. This fact is significant, as it shows a want of absolute faith in the wisdom of such a course. In all these ways, therefore, breeders have answered the question at the head of this paper, and they have answered it negatively, and in many instances the negative has been very emphatic. And among those who openly avow an unbelief as to the wisdom of applying the tuberculin test, strange to say, there is now and then a veterinarian, a man who is usually reluctant to write his real name under his production.

Notwithstanding this unmistakable expression of view, I am glad that the record as being in entire disagreement with the view held by so many of the stockmen with reference to this question. Most unhesitatingly do I say that I believe, in the light of self-interest and in justice to the public, the breeders of pure-bred cattle should test their herds. Most unreservedly do I say that it is the privilege of those who do thus test their herds to advertise the same for their commercial advantage. The

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future will determine the wisdom or the unwisdom of all these propositions, as expressed above, and so satisfied am I as to what the verdict of the future will be that I want to be on record thereto, notwithstanding that the current of public sentiment at the present time may carry those propositions a thousand miles seaward. And now, let the propositions be further analyzed.

The first proposition claims that, in the light of self-interest, breeders should periodically test their herds. It is not meant that they shall go on testing them forever with the same frequency, but they shall test them with sufficient frequency to assure themselves that their herds are free from the great bovine destroyer. That they ought to do so in the light of self-interest is evident from the facts: first, tuberculosis is a communicable disease and once in a herd, if not detected and removed by some curative means, like the brook, it will go on forever; second, there is no other way of certainly determining the presence of the disease than through the tuberculin test; third, the loss from tuberculosis, once it is lodged in a herd, from which no measures are taken for removing it, will far exceed the cost of making the necessary tests which make it possible to remove the diseased animals. Notice please, I am not advocating making the test compulsory, but simply claiming that, in the light of self-interest, breeders of pure-bred cattle should test their herds. If the proposition is reasonable and equitable, and surely it is, does not the hostile attitude of the breeders to the tuberculin test and to those who advocate it seem strange? It reminds one of the little boy who struck the bottle that contained the medicine that would have made him well, and of the far less excusable action of the man who struck the physician who lanced the festering sore which had been racking him with pain.

The second proposition claims that in justice to the public the breeders of pure-bred stock should test their herds. If any breeder is quite sure that he has faith in the reliability of the tuberculin test properly applied, is he quit honest if he sells animals from that herd to another? Or, to press the matter more closely, if he has had the opportunity to inform himself with reference to the reliability of the tuberculin test and fails to do so, and consequently believes that the tuberculin test is not reliable because he wants to believe thus, and if he goes on selling tuberculous cattle from his herd to his neighbors, is he innocent? Are we not held responsible, not only for what we know, but also for what we ought to know? Would such an one like another to sell tuberculous cattle to him? Weigh this whole course of procedure in the balances of the Golden Rule, and where does it place the man who goes on selling animals from a herd which he knows to be more or less infested with tuberculosis?

The third proposition claims that it is the privilege of breeders to free their herds from the presence of tuberculosis by using the tuberculin test, and then to advertise the fact with a view to enhance their sales. Why this has not been done shows, as previously intimated, a lack of entire confidence on the part of many breeders in the reliability of the test. But, observe, this fact by no means endangers its reliability. To the writer it is clear that tuberculous cattle should not be sold for breeding purposes, and it is equally clear that they should not be bought except when bought or sold for purely experimental purposes. I would not buy a pure-bred animal for breeding uses, unless it has been subjected to the tuberculin test, nor could I advise anyone else to do so. It would be different, of course, if no tuberculin test had been brought to us with its positively benign influences. If I were breeding pure-bred cattle, I would not only keep the herd free from tuberculosis, but would advertise the fact. Do you mean to say that I would not enhance the value of my animals commercially? You can not say that. Now, suppose the breeders quit sailing so close to the treacherous shore. Suppose any considerable number of them launch out boldly into the deep and advertise that their animals are guaranteed free from tuberculosis at the time of sale. What will be the result? Will not their wares have the preference in the public markets? Will not such a course of action in time compel all breeders of pure-bred stock to do likewise? Such an argument would be greatly effective in popularizing the tuberculin test and thus lessening tuberculosis, and those breeders who are first in the adoption of such a course of action will assuredly be correspondingly rewarded.

The Live Stock Outlook.

Current prices compared with a year ago show the best cattle a little lower, chiefly, however, because of poorer quality, and the bulk of the cattle about 25 cents higher than a year ago. Hogs are selling 30 to 40 cents higher than a year ago, while sheep are now \$1.25 lower and lambs \$2.10 per 100 pounds lower than a year ago.

Prospects favor higher prices for cattle, perhaps a little setback from the present prices on hogs, strong prices on sheep and little or no relief for owners of winter-fed lambs.

The cattle market lately has been of the kind that, on days of big runs, it would appear the buyers must get the best of it; then the demand would be so strong and active that the trade would close better than expected. This happened several days when there were as many as 22,000 to 24,000 cattle on the market.

The eastern beef market has greatly improved, and with a strong foreign demand the situation in the cattle trade is very satisfactory. The prime corn-fed cattle are going to be very scarce and the range of prices will grow narrower.

With hog receipts in the west for the year so far the heaviest in eleven years and prices for hogs the highest in ten years the strength of the consumptive demand for hog products is most forcibly illustrated. The average prices for the past three months have been on a short-crop basis, but the crop has not been short except as measured by an exceptionally strong demand.

It was about a year ago that hog prices for the last year reached the high point of the year and many are of the opinion that history is going to repeat itself. Many think there will be only a temporary break with late summer prices higher than ever, while others argue that the young pig crop is good and that it will not take long to nurse along a new supply. This is a year when the old song about "they kept the pig in the parlor" would apply.

The recent export movement of sheep has been the heaviest ever known and there is no likelihood of any reduction in the foreign demand for some months to come.

The receipts of live stock at four leading western markets during the first quarter of the year showed a gain of 39,000 cattle, 152,600 hogs, and a decrease of 96,000 sheep compared with a year ago. The cattle receipts at four points were, with the exception of '93, '94, and '95, the largest for the first quarter in a good many years. Hog receipts for the quarter were the largest since 1891. Sheep receipts for the quarter were smaller than during the preceding three years.—Farmers' Voice.

Live Stock in Paraguay.

According to the census of 1899, the live stock in Paraguay included 2,233,000 cattle, 182,719 horses, 7,488 mules and asses, 214,020 sheep, 32,285 goats, and 23,850 hogs. This was a great increase over the total as ascertained by the census of 1887. In that year there were 912,245 cattle, 88,106 horses, 5,226 mules and asses, 42,490 sheep, 15,542 goats, and 13,375 hogs.

Stock raising in Paraguay is favored by excellent prairie lands, good grasses, and abundant water. The establishment of an estancia, or stock farm, requires comparatively little capital. One square league of camp land, containing 1,750 hectares, or 4,600 acres, will support 1,500 head of cattle, and costs, according to location, as ascertained by the Monthly Review of Asuncion, from \$1,200 to \$1,500 gold. A fence composed of 4 or 5 strands of wire, with solid and durable posts set 2 meters apart, will cost perhaps \$550 gold, including labor. It is essential that a patch of forest land be included so that shade may be furnished the animals during the hottest portion of the day as well as providing partial shelter for them from driving rains. The price of horned cattle ranges from \$5 to \$6 per head.—Shoe and Leather Review.

Horse Breeder's Suggestions.

C. L. MORRISON, IN NATIONAL STOCKMAN AND FARMER.

If you want to breed registered stock, select for your foundations the most perfect individuals of the best strains.

If grades are your aim, then select good specimens and breed up, always using pure-bred sires. In crossing look well to adaptability of both the individuals and families.

Retain the young females to breed as they mature, disposing of the older and poorer dams.

Sell the poorest stock first, keeping the best, and soon it will all be best. Study the needs of the market you

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expect to supply, and breed to that end.

Neither sires nor dams should ever be burdened with flesh. Stock horses should only be in good working order. Give plenty of exercise. Some impotent sire may be restored to potency by actual labor.

Give regularly, clean, substantial food, so prepared that you would be willing to taste it yourself. Have water abundant and pure; stables well ventilated, but warm and dry, with plenty of light and cheer.

Be kind, friendly, and sociable with your stock.

Don't "break," but teach your stock kindly what you want of them, and what they may expect from you.

Never breed to unsound or diseased stock.

Never breed to a stallion that is not what you want his colts to be like.

Never breed to any animal simply because of his low service fee.

Never breed a female simply because she is a female, but because she has some particular merit which you wish to increase in her produce by coupling her with a meritorious sire.

Effigies of Monarchs.

Sightseers in Westminster Abbey were until a few years ago shown the famous wax effigies of Queen Elizabeth, Queen Anne, King William of Orange, and his wife, Queen Mary, and many other distinguished persons. These were funeral effigies, models of deceased monarchs that figured most prominently and significantly in the pageants and processions that preceded their burial.

In very early Saxon and Norman times, when kings were sometimes "spirited away," and for political purposes mock funerals would have been arranged had not very stringent means been taken to prevent such frauds, to convince the people of the demise of the Crown the dead monarch's body was embalmed, dressed in its most costly robes, and having been exhibited lying in state, was finally carried on an open bier in the sight of all to its last resting place. An old chronicler describes the ceremonies of King Henry II most minutely, and says that he was clothed "in royal robes, his crown upon his head, white gloves upon his hands, boots of gold upon his legs, gilt spurs upon his heels, a great rich ring upon his finger, his sceptre in his hand, his sword by his side, and his face uncovered and all bare."

Later the custom and its primary inception declined, but it did so after the manner of all funeral practices, very slowly and gradually. While lying in state continued and the face of the dead was still permitted to be visible, effigies were prepared to simulate the body upon the bier in the final public procession. The figure made represented the departed monarch as closely as possible, and was dressed in the actual robes of the departed. The face was carved in wood until wax modeling came into vogue and was found to be more like reality, and until the custom was absolutely abandoned wax was used.

A high bier was provided for the effigy to rest upon, so that those who stood in the streets could see the face of the departed, as well as those who crowded the windows. In course of time the exhibition, as was only to be expected, became unseemly, both on account of its essential tawdriness and of the behavior of the crowds who used to watch the procession. When the practice was finally dropped such of the waxen effigies as had withstood the attacks of time continued to be exhibited for a price in Westminster Abbey, where some of them remain to this day locked away in dusty receptacles. They are still visible to those who obtain special permission to view them, but were withdrawn from public exhibition because they aroused amusement rather than the solemn feeling they deserved. The

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withdrawal from public view is perhaps the best thing that could have happened to them.—London Daily Mail.

Great Angus Sale at Kansas City.

One of the most important and interesting combination public sales of Aberdeen-Angus cattle ever held at Kansas City, is booked for April 29 and 30. The consignments are from such good herds as those maintained by Messrs. Haley Bros., W. S. Karnaghan, W. J. Turpin, S. S. Melvin, and John Harvey as stated in the half page display advertisement appearing elsewhere in this issue. We take special pleasure in calling the attention of our readers to this particular sale because we think it will be a good one to attend. It is a grand aggregation of this irrepressible "market topping" breed, that the sellers are going to place at the disposal of the public in this two days' auction event. It will be a particularly good sale for those to attend who wish to buy some choice breeding stock with which to start a herd or to buy for the purpose of adding some tops to already established herds. Those on the lookout for some show yard material will also want to make it a point to attend this sale, for they are offering both winners and prospective winners. The breeder looking for a choice bull to head his herd will have several of that sort from which to make selections. The farmer or stockman wanting to purchase a good pure-bred An-

to understand that they have accumulated a valuable lot of breeding cattle. These are all to be sold without reserve for the purpose of settling up the partnership interests as explained last week. It is at dispersion sales that buyers have a chance to secure animals that would not be parted with under any other circumstances. This sale will be no exception to the rule and everything will be cut loose to the best bidder. From our notes concerning the individuals, taken at the farm during a recent visit, we draw the following: Bulls, twelve head, including the two stud bulls, Nabob of Lakeside

his legs and has a neat bone. There are several good young bulls sired by old Blackbird Hero that formerly headed the herd of Messrs. J. Evans, Jr. & Son, of Iowa, and recently sold for \$500 to Mr. M. A. Judy, of Indiana. Blackbird Hero is a bull with a record and quite a number of his get go in this sale, as he has been one of the bulls at the head of the Haley herd for the past two years. Among the younger bulls the outstanding attraction is Coquetfeld. He has a great sire, a great mother, is a grand calf and bred in the royal purple. He is as smooth as a ribbon and very uniform with showyard

being a good judge, declares that he has never seen a yearling that he thought could beat her. With all her other good qualities she has lots of size. To describe her would be very much like describing a great big model and, as Mr. Haley asserts, it is not so difficult to breed a good little one, but when an equally good big one is produced it should be worth something. She has not been bred because Mr. Haley figures that whoever buys her will want to show her. Coquet 4th is undoubtedly one of the most valuable cows in the herd. She has about all that could be asked for in a high-class breeding cow and will be an ornament to any herd. She is bred to Blackbird Hero. Euphemia 3d is a six-year-old Erica and is one of the choice cows of the breed. She unites substance, quality, spring and depth of rib, carries a fine udder and has a heifer calf at foot by the Pride bull, Imp. Pacific. Gypsy of Cedar Lake is a good cow to buy. She is a level, superbly ribbed cow, that has been shown with success and has proved her value as a breeder. Venus Cantine is a large cow of good length, good breeding, and has an extra nice young bull calf at foot. Others to which we direct attention are Rose of Vernon Prairie 3d, Majella 2d, Medicine Valley Addie, Medicine Valley Beauty, Lakeside Ardistle, Maple View

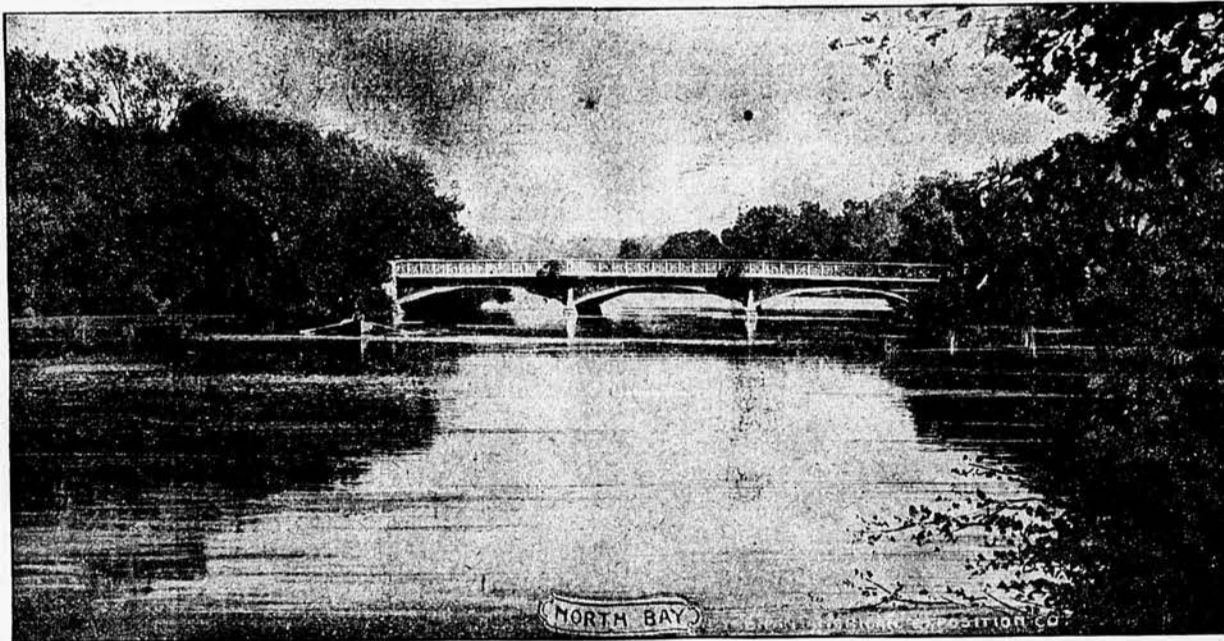


PAN-AMERICAN EXPOSITION
VIEW LOOKING NORTH FROM TRIUMPHAL BRIDGE. © C. C.

gus bull for grading up purposes and with which to produce a class of black polled steers such as always command a selling premium at any age from calves to the time they are sent to market as finished heaves, will make no mistake by attending this sale, because there will be so many good ones to pick from. Since the fat stock show held at Chicago last December, where the Angus steers won such sweeping victories, it should require little argument or persuasion in order to induce farmers, feeders, and ranchmen to wake up to the advantages to be derived from the use of a good pure-bred Angus bull. That they are going to continue to increase in popular favor and the steers be more sought after by feeders goes without saying. In view of this very evident expansion in the demand for Angus steers, sired by pure-bred bulls, it would seem good business judgment for those who have not got them to buy one or a few pure-bred females and engage in the business of turning out bulls to produce these market-topping steers.

THE HALEY DRAFT.

As announced last week Messrs. Haley Bros., of Harris, Mo., are dispersing their fine herd. It is quite generally known that these breeders have been heavy buyers at some of the leading Angus sales of late years and it will therefore be easy for our readers



and Cedar Lake Baron. The former is a son of Gay Blackbird, making him a half brother to the \$3,000 Gay Lad. In some respects he is very much like Gay Lad, but has the advantage of that noted bull in size and carries thicker, better packed hind quarter and thighs. He was purchased from Mr. C. F. Fleming, of Dakota, Iowa, who reports that his calves by Nabob have been quick sellers. He is in just breeding condition, very active, a good server and will be a bargain at the price he is likely to sell for at this sale. Do not fail to look up his picture and his pedigree, both of which appear in the sale catalogue. Cedar Lake Baron is a two-year-old past. He carries a straight top line with a smooth, even fleshed back, good loin, extra smooth over hips, wide in front, stands well on

quality. He is too young for immediate use, but is good enough to buy and wait on. Haley's Pride and Hero of Haley are a good pair of Blackbird Hero bulls. Of the females we direct attention to Abbess of Estil 4th. She is a three-year-old, is a wide, low-down, heavy-fleshed young cow and is bred to the queen's taste. Be sure to look her up in the catalogue. Jeanette's Favorite 2d, the second prize yearling at the Kentucky State fair last year, possesses a beautiful head, full bulging neck vein, smooth shoulders, with a spread of back from neck to tail herd that will not fail to attract attention. She is bred to Blackbird Hero. Golden Flora, the second prize heifer calf at the late Chicago International, will not fail to be in demand. Mr. John Haley, who enjoys the reputation of

books contain no better pedigrees than many that are found in the catalogue of this sale."

The Late Mr. J. C. Curry.

By the recent death of Mr. J. C. Curry the fine stock interests of the West, and particularly of Kansas, which has been his home for twenty-four years, sustained a severe loss. Mr. Curry's ill health has been a matter of concern to his friends for several years and his persistent activity and attention to business may have hastened the end, which came while he and Mrs. Curry were visiting at the home of their brother, Mr. J. O. Curry, of Aurora, Ill.

The deceased was born Nov. 10, 1841, at Westchester, N. Y. When ten years of age he came with his parents to Ill.

inois, which State was his home until his marriage, nearly twenty-five years ago. With his wife he moved at once to Kansas, locating at Quenemo, in Osage County, where he soon identified himself with public matters, both local and State, and particularly with the breeding of pure Hereford cattle. It was in this capacity he became most widely known. His brother, Mr. J. O. Curry, of Aurora, Ill., was at that time prominent as an importer of Herefords and Mr. J. C. Curry soon took a like

after remaining in the earth for many years; that these spores form in the carcasses of dead animals and are brought to the surface from the pits where such carcasses are buried through the agency of earth-worms; that disinfection, as it was practiced previous to 1876, was ineffectual in destroying the spores of this microbe, and that more active agents were required; that the essential condition which keeps up the disease is not the character of the soil, not the condition

round and yellow, a hundred being often found in a single mass. The young larvae are almost black, developing two pitch colored stripes on the sides of the body, with a yellowish-grey stripe through the middle about twice the width of the dark ones.

When winter approaches, these worms pass into the ground and enter what is called the chrysalis stage. In this stage they are about half an inch long, of a bright yellow color, becoming darker as they remain on the

ing of alfalfa burnishes an admirable opportunity for the hordes of army worms to organize. We would advise farmers to start in now disking alfalfa fields in order to disturb cocoons and expose them to the rigors of later cold snaps.—The Ranch.

Agriculture at the World's Fair.

The Louisiana Purchase, the territory acquired by President Jefferson for the United States from France in 1803, comprises an area of 1,037,735 square miles, divided into 14 states and territories. Within these states and territories there are 165,878,336 acres of land in cultivation, which are valued at \$3,193,461,299. The annual value of the farm products of the Louisiana Purchase is \$1,876,184,431.

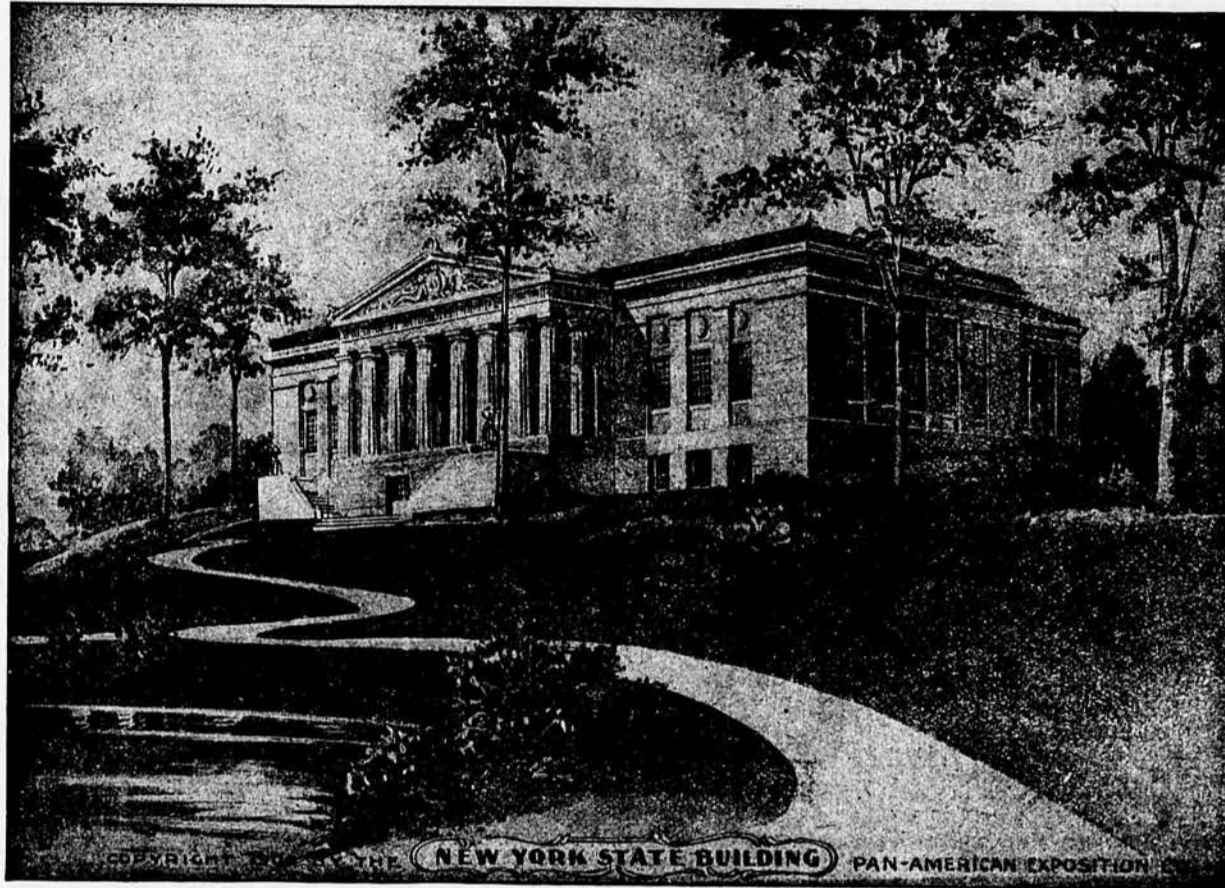
The annual value of the manufactures of the Louisiana Purchase is \$1,006,332,611, and of the mineral products, \$259,909,128. The combined value of the manufactures and mineral products is \$1,266,241,739.

The annual value of the products of the farms in the Louisiana Purchase exceeds the combined value of the manufactures and mines by the enormous amount of \$609,942,692.

We present these otherwise incomprehensible figures in this comparative way to emphasize the claim that agriculture has for recognition in the World's Fair that is to be held in St. Louis in 1903. Scarcely will any one deny the claim in the face of the bare figures presented, for do not they prove the truth of the assertion so often made that agriculture is the basis of the nation's prosperity and the people's welfare?

But conceding the fact, will it follow that agriculture will be accorded its just dues in the management of and arrangements for the fair? Possibly not, for farmers as a class lack that aggressiveness which compels recognition. It is assumed that the men with the "pull," the politicians, will be the ones who will be given preference with respect to appointments, and that as a consequence of this, concentrated capital invested in manufacturing and in the great market centers will have more consideration in the arrangements than will the vastly greater amount invested in agriculture, but which is widely scattered.

But we trust that the governors of the various states of the Louisiana Purchase and of the Union will take a statesman-like view of the matter and see to it that agriculture is properly represented on the several state commissions, to the end that the most important industry of the world shall



position in Kansas as a discriminating judge and enthusiastic supporter of his favorite breed.

Mr. Curry's place as a rational promoter of fine stock interests will not easily be filled. As an intelligent citizen and public officer his section of the State has not many worthy successors. His example and guidance as a Christian and as a husband and father must now serve the bereaved community and family.

Mrs. Curry and her son will continue in the work which was the pleasure and chief business interest of Mr. Curry in life.

The Germ Theory of Disease.

DR. D. E. SALMON, U. S. BUREAU OF ANIMAL INDUSTRY.

The great contest over the germ theory of disease was settled by the experiments reported in 1876 and 1877, and the way was open to apply this great discovery to practical medicine. What a revolution in medical thought and practice has resulted can be appreciated only by comparing the text of medical works of twenty-five years ago with that of the present day. There were some individuals, however, who could not understand the difference between positive and negative evidence, and who did not for years fully grasp the fact that the germ theory was established. These persons continued to raise objections, and some of them are still telling us that investigators have gone mad over bacteriological studies and that the whole structure which they have raised during the last quarter of this century is doomed to crumble and disappear. Such objectors can have little effect upon the progress of science at this day, since every student has learned that a fact once established by positive evidence is as solid as the mountains and endures for all time; yet many will die without accepting the germ theory, just as numerous contemporaries of Harvey died disbelieving in the circulation of the blood, but the recorded facts and the demonstrations of the germ theory will stand, as Harvey's discovery has stood, and it is as fruitless to inveigh against them as to attempt to sweep back the rising tide with a broom.

PRACTICAL RESULTS.

Many practical results in the treatment of anthrax outbreaks have followed the discovery that it is caused by a particular microscopic organism which we now know as the *Bacillus anthracis*. It has been recognized that this bacillus may multiply in the soil and in stagnant water; that its spores may retain their vitality and virulence

of the atmosphere, not the defects of the stable, but the presence of the bacillus in the soil of the pastures and upon the forage gathered from infected fields; and, finally, that the bacillus may be attenuated and form a vaccine which will in most cases grant immunity and protect animals from the infection. The use of this vaccine is increasing, and has reduced the mortality in the infected districts from on average of 10 per cent with sheep to less than 1 per cent, and from 5 per cent with cattle to less than one-half of 1 per cent.

ground. Professors Brunner and Hunter, of the Nebraska university, who have investigated this matter thoroughly, advise plowing as deeply as possible all fields in which this worm has been observed, delaying the planting of winter wheat until September, keeping the fields clear or volunteer grains, and disking the wheat fields and alfalfa fields in the spring so as to destroy the crop in its chrysalis state. This is really about all that can be done until the worms develop and begin their ravages the next season.



The Alfalfa Worm.

Growers of the hay in some of the alfalfa States have been troubled for the last year or two with what is known as the alfalfa worm, but which is more commonly called the fall army worm, differing in some features, but not so generally destructive as the regular army worm that appears in the month of June. The moth, of which this worm is the larva, deposits eggs in clusters of several layers on the leaves and stems of the young plant, the eggs being about the size of a pin head,

As they progress from field to field it is possible to trap them by making a ditch with steep sides on the side of the field they are about to attack and then drag a log back and forth and crush them. We apprehend that in this, as in most other insect attacks, parasitic enemies will furnish the best protection in the long run. Whenever one family of insects becomes too large parasites multiply and reduce them to their proper limit. Nearly all kinds of destructive insects are with us in small numbers and the general grow-

be adequately set forth in the St. Louis World's Fair in 1903.—Colman's Rural World.

WANTED—TRUSTWORTHY MEN AND WOMEN to travel and advertise for old established house of solid financial standing. Salary \$780 a year and expenses, all payable in cash. No canvassing required. Give references and enclose self-addressed stamped envelope. Address Manager, 355 Caxton Bldg., Chicago.

ATTENTION! Gents' finest blue, heavy overall with bibs. Cannot rip. Any size on receipt of 75 cents. A rare bargain. EAGLE PANTS WORKS, 306 Market St., St. Louis

The Home Circle.

A RECIPE FOR SUCCESS.

How is it I have prospered so? How is it I have struck throughout the hull of my ka-reer jest one long streak of luck? Intelligence, young man; that's all. I reason an' reflect— 'Tis jest intellijunce an' brains an' straight-out intellec'.

W'en I git up I'm allus sure to dress me right foot first, Or put my drawers on wrong side out, or hev my vest reversed. For them are signs you'll hev good luck; an' eddicated man Knows all them signs, an' shapes his life on a consistent plan.

I've strewed ol' hoss-shoes down the road for somethin' like a mile, An' I go out an' hunt 'em up a-every little while. But if you fin' a hoss-shoe, w'y, you're sure to prosper then; A fac' that is fallier to eddicated men.

A cat's tail p'intin' to'rds the fire it is an awful sign; But I hev counteracted it with every cat of mine; If my cat's tail should p'int that way it wouldn't give me scares; I'd go in my back entry then an' simply fall upstairs.

It's a good sign to fall upstairs, an' counteracts the cat; An' that's the way I shape my life, I balance this with that. I see four crows—bad sign, I know—might scare a man's that bolder; But I jest wait an' see the moon rise over my right shoulder.

The moon it counteracts the crows; one balances the other, For one is jest wiped out, you see, an' canceled off by t'other. I hear a dog howl in the night; it don't give me no dread, I balance it by gittin' out the right-hand side the bed.

An' so I've prospered all my life by jest a little pains, Intellijunce, young man, that's all, an' intelliec' an' brains. 'Tis ignorance that makes men fall. An' wisdom—nothin' less— Inlighthumnt an' knowledge, sir, can bring a man success.

—Sam Walter Foss.

THE MAN OF THE WEEK.

Benjamin Franklin.
(Died April 17, 1790.)

On hearing of the death of the man who "knew how to subdue thunder and tyranny," Congress passed a resolution that the members should wear mourning for one month out of respect for a citizen "whose native genius was not more an ornament to human nature than his various exertions of it have been to science, to freedom, and to his country." In the National Assembly of France, Mirabeau proposed the wearing of mourning for three days to "participate in the homage rendered in the face of the universe to the rights of man, and to the philosopher who has so eminently propagated the conquest of them throughout the world."

But "the many-sided Franklin" was more than "a celebrated American philosopher, statesman, diplomatist, and author." He was the great apostle of thrift and prudence, whose wise sayings have probably had more influence for good than those of any other proverb-maker of modern times. His Poor Richard's Almanac, first published in December, 1732, was the means by which he gave to the world the everyday wisdom which won him friends and fame and made him genuinely useful to the common people of his own time and country, and later to the people of all countries. This first issue was called "An Almanac for the year of Christ, 1733." It was popular from the start, and three editions were published.

Franklin continued to publish this almanac annually for twenty-five years. The last one was a "skimming of the cream from the twenty-four previous issues," and was called The Way to Wealth. Paul Leicester Ford gives these interesting facts:

"Seventy-five editions of it have been printed in English, fifty-six in French, eleven in German, and nine in Italian. It has been translated into Spanish, Danish, Swedish, Welsh, Polish, Gaelic, Russian, Bohemian, Dutch, Catalan, Chinese, modern Greek, and phonetic writing. It has been printed at least four hundred times, and is to-day as popular as ever."

Franklin was not a farmer, as were Washington and Jefferson, but no one can appreciate more thoroughly than the farmer this fragment of Poor Richard's wisdom:

"He that by the plow would thrive, Himself must either hold or drive. And who can understand better than the farmer that "it is hard for an empty sack to stand upright"?"

Franklin's fable of the tax-gatherers is characteristic. A crowd were waiting for the beginning of a public sale,

and some were complaining about the heavy taxes. Some one asked a certain Father Abraham what he thought of the times. The old man stood up and said: "If you would have my advice, I will give it you in short; for 'a word to the wise is enough,' as Poor Richard says." When the people had gathered around him, he went on:

"Friends, the taxes are indeed very heavy, and if those laid on by the government were the only ones we had to pay, we might more easily discharge them; but we have many others, and much more grievous ones to some of us. We are taxed twice as much by our idleness, three times as much by our pride, and four times as much by our folly; and from these taxes the commissioners can not ease or deliver us, by allowing an abatement. However, let us hearken to good advice, and something may be done for us; 'God helps them that help themselves,' as Poor Richard says."

The following sayings are typical of Poor Richard—and not without wholesome lessons for most of us:

"Drive thy business, let not that drive thee."
"Early to bed and early to rise
Makes a man healthy, wealthy, and wise."

"He that riseth late must trot all day, and shall scarce overtake his business at night."

"A man may, if he knows not how to save as he gets, keep his nose all his life to the grindstone, and die not worth a groat at last."

"A fat kitchen makes a lean will."
"Beware of little expenses; a small leak will sink a great ship."

"Necessity has no law; I know some attorneys of the same."

"He that is of opinion money will do everything, may well be suspected of doing everything for money."

"Dine with little, sup with less;
Better still, sleep supperless."

"Cheese and salt meat
Should be sparingly eat."

When Franklin was in London he was given to understand that his country was not equal to England because it had no leisure class. The wise philosopher admitted that his country lacked that mark of advancement, and said:

"The husbandman is in honor there, and even the mechanic, because their employments are useful. . . . They are pleased with the observation of a negro, and frequently mention it, that 'Boccarora (meaning that white man) make de black man workee, make de horse workee, make de ox workee, make ebery ting workee; only de hog. He, de hog, no workee; he eat, he drink, he walk about, he go to sleep when he please, he live like a gempleman."

As an investigator of scientific problems, Franklin had no superior in his day. His discoveries in electricity were fundamental. For his demonstration that lightning is merely a discharge of electricity, he received the Copley medal from the Royal Society of London.

As a promoter of education he has few equals. In 1743 he founded the American Philosophical Society and the University of Pennsylvania. Philadelphia is also indebted to him for her first and greatest library and her hospital.

Franklin's public life is known to every school boy. It is enough to say here that he was a member of the Continental Congress in 1776 and of the committee that drafted the Declaration of Independence; that he was one of the most influential members of the constitutional convention; that he was chief member of the commission which secured the treaty by which France recognized the independence of the United States, he being ambassador to France at that time; and that he, with Jay and Adams, concluded the treaty of peace with England in 1783. With in international fame as a philosopher, a statesman, and a diplomatist, what wonder that Jefferson, when someone in Paris said to him, "You have come to fill Franklin's place?" should answer, "Oh, no, sir; no man living can do that!"

Franklin was 84 years and 4 months old the day he died, having been born January 17, 1706. D. W. WORKING.
Denver, Colo.

Green Peas.

To secure best results in the cookery of peas they should be selected of uniform size that the cooking of all may be completed at the same time. Shell out of the pods, look over and wash. Cook in boiling salted water until thoroughly done when they will be soft and tender and mash readily. They can then be made into a variety

of dishes by the addition of milk or other seasonings. Following are some ways of dishing up this excellent vegetable in which the result is appetizing and nutritious:

PUREE OF PEAS.

Cook a pint of shelled peas in boiling salted water enough to cover until soft and tender. Pour into a colander or sieve and mash, removing the skins. Heat a tablespoon of butter in a saucepan until it foams; add a tablespoon of flour and half a teaspoon of salt and blend. Then add a cup of heated milk a little at a time blending each time until smooth. When all the milk has been added cook ten minutes longer at boiling temperature, stirring to keep smooth. Add this to the peas and the water in which they cooked. Heat together and season with pepper if desired, to taste. Serve hot with crackers.

GREEN PEA SOUP.

Make a beef soup and twenty minutes before time to serve the meal add green peas that have been looked over and washed thoroughly. A teaspoon of diced onion added with the peas makes an excellent addition if the flavor is liked.

MUTTON AND PEAS.

Cut up left over mutton into two inch dice. Left over peas can also be used if it is convenient to cook them earlier in the day. Use at least as much diced mutton as you do of peas. Let simmer together half an hour or cook until the peas are soft if they have not been cooked. Add water necessary for cooking. Add butter, salt and pepper a few minutes before removing from the stove so that the seasoning may cook in somewhat.

PEAS WITH WHITE SAUCE.

Boil peas until tender and drain off water. Turn into serving dish and cover with a white sauce made the same as in pea puree, given above. Have toasted thin slices of bread. Serve with the peas.

PEA SALAD.

Cook peas until tender. Pour off the water and allow the peas to cool until very cold. To a pint of peas use one cup of English walnut meats. Reserve a dozen perfect halves for the top of the salad. Cut the meats into small pieces and mix with the peas. Cook the yolks of two eggs with one-fourth cup of vinegar in a saucepan, stirring to keep smooth. Add 1 teaspoon salt and a little mustard and when cold thin with cream. Pour over the salad and blend well. Line a salad dish with curly leaves of lettuce letting the leaves make a frill around the top of the dish. Fill with the salad mixture and place the reserved English Walnut meats over the top. Other

nuts may be used if they are more easily obtained.

MARY WAUGH SMITH.

Get Out Your Delft China.

The woman who would be thoroughly up to date must find some Dutch china to adorn the dining room or library shelf. There is a boom in everything Dutch, owing to the recent marriage of the little queen of Holland—just as everything Dutch was at the high tide of popularity at the time of her splendid coronation.

Many of the historic household relics of the families of New England are undoubtedly Dutch. This is true of those whose forbears came to this country in the Mayflower, for the Pilgrims were for many years residents of Holland and sailed from Delftshaven to America. Many of the pieces of china seen in museums and said to have come over in the Mayflower are specimens of Dutch workmanship.

As, of course, real old delft is rare, manufacturers of china have attempted to supply the demand by substituting modern delft for that of old-time manufacture.

Old delft was nothing more than a pottery on which was a white enamel. On the enamel a decoration, generally of blue, was applied, while yellow, green, and red decorations were not wanting. The quaint, stiff figures on many of the old pieces of china are not characteristic of the Dutch potters. The oldest delftware followed in pattern that of the Chinese porcelain, of which it was an imitation.

The first pieces of china brought home by the Dutch traders from China were cups and pots in which to serve tea—the new beverage which they imported from the east. Nearly all of the porcelain happened to have decorations of blue, and so the makers of the ware in Holland began by adorning their pottery just as their models were decorated. So great became the demand for this new ware that at one time, about the middle of the seventeenth century, about 7,000 people of the town of Delft, or more than one-fourth of the entire population, were engaged in its manufacture.

The very oldest delftware is in blue and white and decorated with figures, imitative of the Chinese. The earliest forms of the ware were teacups and teapots, platters and other dishes being later forms.

One of the oldest makers was Albrecht de Keyser, a potter, who is known to have lived in Delft in 1642. There are several good specimens of his work in this country.

It was not until the middle of the eighteenth century that delft began to display the Dutch pictures—windmills, scenes along the canals and seaports, with clumsy craft at anchor. The cur-

ious part of it all is that such pottery originated not in Holland, but in England, France, and Germany. Recognizing the popularity of the new ware, manufacturers in Liverpool, Rouen, Bristol, and Bonn applied themselves to the task of producing as fine delft as was made in Holland. In order to make their pottery appear characteristic they adopted the use of Dutch figures as decorations.

Strange as it may seem, delftware is not now produced at the town of Delft. The city's claims for greatness are now along other lines. In that historic little town of 23,000 inhabitants, in due course of time, the body of Holland's queen will one day be laid in the new church beside the bones of her ancestors. On the day of her marriage, as on the day of her death, the great chime of 500 pieces, one of the finest in the world, rang out the favorite patriotic air of the Dutch—"Wilhelmus Van Nassau." The arsenal of the town was the old warehouse of the Dutch East India Company, whose ships brought the first Chinese porcelains to the country and indirectly made the town famous through its potteries. In the old palace William of Orange was assassinated in 1584. Dyeing, weaving, distilling and cooperage are now the chief occupation of the townspeople.

It will be seen that tourists who go to Delft with a view to buying at a small price the ware of that name will be disappointed. In many Dutch houses, to be sure, old pieces may be found, but at the present day the ware comes largely from Bonn and Fayence. The handsomest of the recent specimens consist of blue and white designs. Delft is excellent as a decorative china and looks well in combination with dark furniture, particularly carved oak. The revival of its popularity is greatly influenced by interest in Holland's girl queen. In both Paris and London she is popular, and any event that brings her prominently before the public insures a fashionable vogue for everything relating to Holland.—Washington Star.

The Young Folks.

A KITCHEN CONVENTION.

The fork said the corkscrew was crooked,
The remark made the flatiron sad;
The steel knife at once lost his temper,
And called the tea-holder a cad.
The teaspoon stood on its mettle;
The kettle exhibited bile;
The stove grew hot at the discussion,
But the ice remained cool all the while.

The way that the cabbage and lettuce
Kept their heads was something sublime;
The greens dared the soup to mix with them
And the latter, while it hadn't much thyme,
Got so mad it boiled over—the fire
Felt put out and started to cry;
The oven then roasted the turkey,
And the cook gave the grease spot the lye.

The plate said the clock in the corner
Battered,
Transacted the business on tick,
And the plate, which for years had been
The clock said was full of Old Nick.
The salt said the cream should be whipped,
The cinnamon laughed—in a rage,
The cream said the salt was too fresh,
And its friend wasn't there to be sage.

Next the pepper, whose humor is spicy,
"I dare any fellow," did cry,
"To cauter reflex on upon me!"
The mirror took up the defy.
Then the ax, with a whit, sharp and cutting,
Declared that the rug had the floor;
While the key said the knob should be worshipped,
'Cause it was the right thing to adore.

The bell, ringing in, said the cook book,
Must be bashful, else wherefore so read?
The stove brush, a thing of some polish,
Looked down on the saucer and said
It thought that the same was too shallow,
But admitted the cup was quite deep;
The coffee tried to climb over the tea leaves,
But discovered the same were too steep.

You'd not think a thing that's so holey
As the sieve would have mixed in the fuss
But it did, for it said that the butter
Was a slippery sort of a cuss.
No one knows how the row would have ended,
Had not the cook, Maggie O'Dowd,
(Her work being done) closed the kitchen,
And thusly shut up the whole crowd.
—The Farming World.

Wildcat Strategy.

In many parts of Tennessee hunting wildcats is as popular as a sport as the fox chase. The wildcat is as tricky as the fox. He has a still more dogged way of sticking to the thickest cover and the most rugged ground, and when overtaken, will generally fight till he dies.

Some years ago I witnessed a wildcat perform an act of cunning quite as remarkable as any I have heard attributed to the fox. With six other young men I was camped near the head wa-

ters of Buffalo Creek, not far from the Alabama line, when we determined to try a wildcat chase, and for that purpose went to a thickly wooded strip of pure opening oak *umbrata* *umbrata* *umbrata* one of its tributary streams. In the dense woods there are occasionally small openings connected by a few old roads, which we could traverse on horseback. Only at the lower end of this strip of woods were there any caves or holes to which the wildcats would be likely to retreat.

Our chase began on a cloudy, drizzling morning—a capital time for the hunt, for in such weather the game is easily started and the trail is strong. Three of our party, including myself, took positions near the junction of the two streams, in the edge of a small space that was clear of undergrowth, but set with taller trees. The other four, taking the dogs, went some two miles up the river to start the game, which would probably pass near our position, either to take refuge in a neighboring bluff on the river bank, or, as was more likely, to dodge the hounds by winding among the rocks, and then doubling on their trail.

We had waited fully two hours when we heard the distant cry of a hound, and soon afterward a chorus of the dogs. They were coming toward our place of concealment, although as yet far off, and to judge from their cry, the trail was growing hotter every moment. After a run of some twenty minutes the steady baying was succeeded by a din of short, sharp yells, and then we knew the pack had sighted the game. We kept perfectly quiet among the bushes, our guns ready for action, and when the hounds were about a quarter of a mile distant we heard a rustling among the bushes, our guns ready for action, and succession of light, springing leaps, and then an enormous wildcat bounded into the clearing.

We should have fired but that our curiosity was roused by the eccentric movements of the creature. For an instant he looked back in the direction of the hounds, then, making several active springs to the left, he returned to his trail and made as many springs to the right. Then, turning he jumped upon the trunk of a leaning chestnut tree which, having been blown down, had been broken off some forty feet from the foot. The break was seven or eight feet from the ground, and the leaning trunk was pointing in the direction from which the hounds were coming.

The cat ran quickly to the upper end, but instead of leaping off, as we expected, he scrambled underneath the trunk, and crawled out upon a broken limb that projected two or three feet from the lower side. Here he sat, close crouched, with his short ears thrown back and his great yellow eyes glaring fiercely.

Pretty soon the dogs came up in full cry on the trail. Three old hounds led the pack, and these were a little puzzled when they came to where the cat had turned aside. The other hounds, most of them being young, scattered all over the open place, all the while baying lustily, but without striking the trail at all. The leaders, having made several starts in different directions, finally struck the trail, and were forthwith joined by the others. Up the trunk they went with sonorous bay, one right after the other.

At the end of the log on the broken limb still crouched the wildcat, motionless as stone, except as he bent his fierce yellow eyes around him and moved his short tail slowly from side to side. Only the thickness of the log was between him and the foremost hound; still he did not move, but only crouched closer to the limb. His pursuers paused but a moment on the log, and then leaped to the ground in quick succession. After a little confusion in searching for the trail, they started off at full speed on the back track, and were soon some distance from the place.

The cat did not move from his place until the hounds were well out of sight. Then, raising his head, he cautiously looked round, and, finding no enemies in sight, he sprang lightly to the ground and started to make off another way. I wished to reward the animal's sagacity by allowing it to escape unhurt, but a shot from one of the party stopped its course.—Youth's Companion.

The Sacrifice.

Mamma—Now, Teddy, we must all try and give up something while times are so hard.

Teddy—I'm willing.
Mamma—What will it be, dear?
Teddy—Soap.—Tid-Bits.

Honesty Ill Rewarded.

"That story about the young dry goods clerk, Howard Berliner, who found \$700 on Broadway the other day and received \$2 for returning it, besides being arrested on suspicion that he was perhaps a thief, is another instance of how there isn't always much inducement for a fellow to be honest," said a well-known tailor, whose establishment adjoins one of the big up-town hotels, yesterday.

"None have greater opportunities for observing incidents of this kind than tailors," continued the maker of garments. "You see, we receive a great many clothes sent in to us by their owners to be cleaned or pressed, and you would be surprised to know how often it happens that money, sometimes of very considerable amount, is thoughtlessly left in the pockets. You would also be surprised to know how lightly the honesty is appreciated which returns this money intact.

"Perhaps my experience has been exceptional for, being so close to the hotel, I get a great many suits which are sent in hurriedly by visitors who want a wrinkle or two pressed out or a crease insinuated and who want the work done quickly.

"Sometimes the thoughtless owner discovers his loss soon after he has sent us his garments, and comes rushing in in a state of greater or less disturbance according as he has forgotten a large or a small amount, to tell us he has left something in his pocket. But often the missing sum is not detected till the customer calls around for his clothes, or until they are sent to his room, and the money taken from the pockets before any work was done is returned to him in a separate parcel.

"One case in particular which I remember occurred last summer. A man who had just come back from the Klondike was stopping across the way, and sent us a suit to be pressed. This was given to one of our workmen with orders to have it ready within an hour. The Klondiker was evidently well provided with gold, for in two of his pockets we found something over \$15,000 in bills and coins and accepted drafts on New York banks. He called in person for the clothes within the hour, and was quite taken by surprise when we handed the money to him. He had not detected the loss.

"And how much," continued the man of sartorian skill, "do you think he gave the employee who found it, and who might have kept the whole amount, and denied all knowledge if he had wanted to do so? Nothing. Absolutely nothing. He thanked me, and would have let it go at that if I had not suggested that perhaps he might want another suit of clothes or something else in our line. Then it evidently dawned upon him that he owed something just as a matter of decency, and he said he intended getting married soon and would need a new dress suit.

"So he had himself measured for a dress suit and was to call the following day to have it tried on. I had my doubts about him, somehow, and decided not to risk anything, and did not cut the cloth. That was the last I ever saw of the man. Had I gone in with the order I should have actually been out of pocket as the result of having given back \$15,000 instead of stealing it. I was out of pocket anyway, for I couldn't help giving the honest employee a dollar on my own account just to keep from feeling mean myself.

"Of course, not all the cases of forgotten bills turn out like this. Not everybody is mean in the matter of money, though a surprisingly large number are. I suppose in the course of a year at least \$150,000 passes through our hands in the form of overlooked amounts in our patrons' pockets. Of all these cases perhaps 10 per cent show a due appreciation at receiving their money again. Ninety per cent don't. It's rather trying on our faith in human nature, but we have to make the best of it."—New York Times.

A San Salvador Earthquake.

"I was in San Salvador, staying with an American friend," said the returned tourist, "when one summer's night, as I sat in a chair on the veranda and he reclined in a hammock there came a rumbling and a quaking. I instinctively knew it for an earthquake, but I said to my friend:

"Jim, aren't we in for a calamity of some sort?"
"Oh, I guess not, was the lazy reply.
"But that was a shock, wasn't it?"
"I guess it was."
"How's the house?"
"Pretty solid; no need of worrying."
"There came a second shock after a minute, and that veranda wobbled

ONE DOSE OF

PRICKLY ASH BITTERS

Purifies the bowels, creates appetite and helps the SLUGGISH BRAIN.

around under it till my head swam. I heard the servants running and yelling, and I was pretty thoroughly scared as I said to Jim:

"Don't you think we'd better get out into the garden, where all is clear?"

"Not yet. The ground out there might open and swallow us."

"But another such shock will bring the house down over us."

"Hardly. That's only the second shock. The third won't be much worse, but the fourth will be a buster. If there is one, we'll take a walk in time."

"The third shock did make things rattle. The house seemed to be picked up and shaken like a rat. I was not only seasick, but frightened to death as I said:

"Don't you think it's time to move, Jim?"

"Not yet; may not be another shock, and we must keep our dignity before the natives. Just listen for a far-off roaring."

"In about two minutes we caught it and left the veranda for the garden, and we were only clear of the house when it collapsed, with every other building on the place. The earth heaved up as if rolling in waves, and as I was flung down I seized the grass and held on. The shock was over in a minute, and as I sat up I called out:

"For God's sake, Jim, is this the last?"

"Sure, Mike!" he laughed. "We never have to exceed four shocks at once."

"And is the house destroyed?"

"Teetotally busted, as you see."

"And what—what—"

"Oh, nothing!" he interrupted. "It's a darned nuisance, of course, but I've got to go to work and build up again. It's the seventh time, and enough to bore a man, but let's look for the whisky and then find a bush to sleep under. Ho—hum! Why can't things let a feller alone when he's dog tired and half asleep?"—Philadelphia Press.

Purify the blood and put the system in order for summer work by using at this time a short course of Prickly Ash Bitters; it is the greatest blood purifier on earth.

Mothers! Mothers!! Mothers!!!
Mrs. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS by MILLIONS OF MOTHERS for their CHILDREN while TEETHING, with PERFECT SUCCESS. IT SOOTHES the CHILD, SOFTENS the GUMS, ALLAYS all PAIN, CURES WIND COLIC, and is the best remedy for DIARRHOEA. Sold by druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

Sudden and Severe
attacks of

Neuralgia

come to many of us, but however bad the case



St. Jacobs Oil

penetrates promptly and deeply, soothes and strengthens the nerves and brings a sure cure.

KANSAS FARMER.

Established in 1863.

Published every Thursday by the
KANSAS FARMER CO., -- TOPEKA, KANSAS.

E. B. Cowgill.....President
J. B. McAfee.....Vice-President
D. C. Nellis.....Secretary and Treasurer

SUBSCRIPTION PRICE: \$1.00 A YEAR.

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



ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of 5.00 per agate line for one year.
Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of the Kansas Farmer free.
Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.
All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper, free during the publication of the advertisement.
Address all orders—

KANSAS FARMER CO.,
116 West Sixth Ave., Topeka, Kans.

NOTICE EXTRAORDINARY. BLOCKS OF TWO.

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

The annual meeting of the American Guernsey Cattle Club will be held at Fifth Avenue Hotel, New York City, on Wednesday, May 15, 1901, at 10.30 a. m.

M. O'Brien, Liberty, Kans., sends a specimen of this year's alfalfa which he says will be ready to cut for the first crop about May 8. Judging by the growth of the sample, Mr. O'Brien need not be surprised if he has to make hay during April.

The English Chancellor of the Exchequer reports that the cost of the small war in South Africa has been £150,000,000, about \$730,000,000. The balance sheet for the last year shows a deficit of £53,207,000. Increased taxation is the only suggestion of the Chancellor.

Last Saturday and Sunday, while Kansas was basking in the smile of the spring sunshine and the prospect of a big wheat crop the beautiful snow was covering the ground a foot deep in all the country east of Cleveland, Ohio. The blue-grass region in Kentucky reported 14 inches of snow. Railroads were demolished and telegraphing had to be suspended. High waters had been alarming before the snow came. After the wet snow had turned to waters destructive floods occurred. Flood damages from the Ohio River were estimated at \$3,000,000.

The New Rhubarb Culture is the name of a book of 130 pages by J. E. Morse and published by the Orange Judd Company, of New York. The method set forth provides rhubarb at a season when it can scarcely be had in the markets. It is found that rhubarb roots taken up any time after freezing and placed in a warm cellar in the dark will produce excellent stalks. These bring fancy prices making the work profitable. The book gives full details as to this process. It also gives much other valuable information about rhubarb and its culture. Price 50 cents.

THE FREE SEED BUSINESS.

Few people will "look a gift-horse in the mouth," but cases are on record wherein the man who wanted to sell a good horse to the recipient of the gift, has detected spavin, sweeny, curb, and a lot of other defects in the animal. So, also, people who receive free garden seeds from the U. S. Department of Agriculture are not very apt to complain if the packages contain few seeds and these of uncertain varieties and doubtful values. But the men who are making their living by producing and selling seeds are keeping a watchful eye on this free seed business and are apt to detect any shortcoming on the part of the contractors from whom the Government buys. The old and reliable firm of D. Landreth & Sons raises a storm by declaring that Uncle Sam is not holding the contractors up to the specifications laid down in the proposal for bids. According to Landreth & Sons the flat packets sent out bear only an imprint of the family name of the vegetable, no specific name, simply a statement that the packet contains a selected variety, such as radish, lettuce, melon, or cucumber. It is claimed that the contractor is thus afforded an opportunity to put in something cheap, and consequently to make an enormous profit, estimated at 30 per cent over the normal and legitimate profit which might be expected upon an honest transaction.

The specifications for furnishing the seeds, issued the 27th of January, 1900, by the Department of Agriculture, called for fixed quantities of designated varieties and sub-varieties, and the various bidders based their estimates on the cost of the respective quantities and special varieties so named in the printed specifications, but it is charged that the contractor has printed seed packets, and filled these packets with sorts of seeds not mentioned in the specifications and supposed to be very common and very cheap sorts. And Landreth & Sons assert that this fraud does not stop with the putting in of unnamed, common, and cheap seeds, but extends to the shaving down of the weights in the packets as designated in the specifications, a curtailment ranging from ten per cent to forty per cent.

It would be better for the cause of the seedsmen if they had omitted the broad insinuation of corruption in the Department of Agriculture. The free seed business is subject to sufficient criticism without charging dishonesty in the department upon which Congress imposes the duty of carrying it on. But the hold of this kind of Government paternalism seems to become firmer every year because senators and congressmen find it a convenient and, to them, inexpensive means of extending recognition to constituents. It is not impossible that an administration may thus cultivate a kindly feeling for its party by gifts of a few cents worth of seeds to each of many people. Very few people, however, care to depend on these small gifts for their supplies of garden seeds.

STOCKMEN ACTIVE.

According to the action of the Fourth Annual Convention of the National Live Stock Association in Salt Lake City, the next annual meeting is to be held in Chicago during the first part of December. As the International Live Stock Exposition is to be held in Chicago at the same time, an unusually large gathering of stockmen from all sections of the country is assured, and as this will probably be the last meeting of this association so far east for some time to come, the occasions will undoubtedly be embraced by those members of the association in the far east to get in touch with the work being done. It is expected to be the greatest meeting of stockmen ever held in this or any other country.

The live stock men and others interested will continue their fight on the Groat bill, as the dairy interests have announced their intention to reintroduce the bill in Congress. The association is interested in securing federal inspection for all interstate shipments of live stock in place of repeated State inspections; the inspection of all woolen or alleged woolen goods and their proper classification before placed on the market; an annual classified census of live stock with prompt publication of the figures; the extension of the time in what is known as the twenty-eight-hour law; a second assistant secretary of agriculture, whose duties shall be to represent the live stock industry of the nation; an amendment to the interstate commerce act, giving the commission judiciary power; a thorough and competent investigation of

the forest reserve dispute by the proper department; federal action upon the destruction of predatory animals; protection of our foreign markets; an investigation by the agricultural department of range poisonous plants, which are causing an alarming increase in the death of stock, etc. Bills or reports on these subjects will be drawn at once. The first day of the convention will be devoted solely to legislative matters, when these bills will be discussed, amended, and adopted, so they may be presented to Congress early in the session. Should any stockman have suggestions to make or bills to offer the secretary of the association will be pleased to receive them at once.

The following provisions and proposed provisions as to membership will interest stockmen:

"Each state and territorial range association of cattle and horses or swine breeders' association shall be entitled to one delegate for each 5,000 head of stock represented by such organization. Each state or territorial association of sheep-breeders shall be entitled to one delegate for each 10,000 head of stock represented by such association.

"Any bona fide stockman who is engaged in breeding, handling, or trading in live stock in the United States may become a member of this organization upon the payment of \$10 and an annual due of \$10; such member to be known as an associate member of the National Live Stock Association, to be entitled to a seat in all conventions, and to one vote upon all propositions which may come before such conventions, except questions affecting the constitution and by-laws of this association. In all counties where there is no regular live stock organization the county commissioners of such county may, upon application, appoint to any convention of this association one delegate. Such delegate shall be required to pay an annual fee of \$5."

RESULTS OF FAITHFUL WORK.

At the close of the present month Secretary T. E. Stephens, of the State Temperance Union, severs his official connection with that organization. Prof. A. D. Wilcox takes his place in the office. In his farewell editorial in the April Kansas Issue, Mr. Stephens speaks as follows regarding the growth of the Union's work during the five years and a half that he has been its secretary.

"The unselfish and devoted and absolutely non-partisan efforts of such workers as James Willis Glead, James A. Troutman, A. H. Vance, W. H. Caruth, Rev. Charles M. Sheldon, F. D. Coburn, J. B. Larimer, E. W. Hoch, Geo. R. Kirkpatrick, Mrs. S. A. Thurston, Mrs. Annie L. Diggs, Mrs. Ella W. Brown, Mrs. E. P. Hutchinson, F. O. Popenoe, Thomas Page, Thomas M. Potter, M. L. Hays, Horace Hurley, Rev. James Kerr, Rev. A. B. Hestwood, A. W. Benson, J. B. Cook, E. W. Cunningham, J. W. Parker, and Dr. L. H. Murlin, every one of whom has rendered help and encouragement times almost without number—the efforts of these, together with the cooperation of hundreds of other loyal citizens in every part of the State standing heroically shoulder to shoulder in the cause of good citizenship, have brought about the following remarkable results within the short space of six years:

I. In the work of the Union:

- (1) Its annual expenditures for temperance work raised from on approximate \$1,000 to an approximate \$6,000.
- (2) The number of its regular field lecturers and organizers increased from not any to three.
- (3) An organ of communication established with a paid circulation of nearly 10,000 copies per month.
- (4) An annual distribution of printed literature four times as great as six years ago.
- (5) Well organized legislative, legal advisory, detective, and other departments.
- (6) The attempt to secure the passage of improved search and seizure and county attorney laws, crowned with success. These laws were both drafted by the Union's legislative committee several weeks before the legislature met.

II. In the State at large:

- (1) Public sentiment in far better condition than at the beginning of this period when the "Mystic Brotherhood" was claiming a membership of "100,000 strong" in the State, and when the governor was expressing inability to enforce the law against popular sentiment.
- (2) Resubmission spoken of with far less frequency than ever before in the history of prohibition.

(3) The passage of the most stringent legislation in twelve years past.

(4) A remarkable revival of law enforcement extending throughout the whole State.

"Some of these results were doubtless helped about through Mrs. Nation's influence; nevertheless without the earnest and patient, although frequently thankless, efforts year after year of the non-partisan bodies of the State, there would have been very little sentiment left in Kansas to respond to Mrs. Nation's extraordinary methods. The reception given her would have been far different—very probably more like that given her recently in Kansas City."

THE HESSIAN FLY.

There are some misgivings about the Hessian fly in its relations to the growing wheat crop. The Ohio Experiment Station has found that, while last season there were hatched but few of the parasitic insects which destroy Hessian flies and thereby prevent their inordinate increase, this season these parasites have hatched in enormous numbers. The hope is therefore entertained that the destroyers of last year's wheat crop in Ohio will this year be themselves destroyed. So far as the writer knows, Kansas entomologists have not given out any information along these lines in this State.

For the benefit of those who would like to know the Hessian fly when they see him, the following description furnished by the Oklahoma Experiment Station is here given:

"The Hessian fly is a small, dark-colored, two-winged insect about one-eighth of an inch in length. This fly passes the winter in the stage called the "flax seed" stage. This "flax seed" is really only the dried external skin of the larval stage of the insect. In the spring the regular pupa is formed and in a short time the adult insect appears. The adult deposits her eggs usually on the upper side of the leaves of wheat and then, in a few days, having finished her task, dies. The young that hatch from these eggs soon work their way down to one of the lower nodes or joints of the stem. Here they pass into the larval stage and the characteristic "flax seed" stage may be found in the wheat during the entire summer. The damage is due to the resulting stunting of the stem and the frequent "lodging" of the grain that results. The application of any insecticide is absolutely hopeless against this result and modified farm practice is the only avenue of escape.

"In the North two broods are formed but in Oklahoma we should expect to find more broods during the season. The last brood formed during the season also deposit their eggs upon the leaves and the young in this case make their way down to the lowest joint beneath the ground. The "flax seed" stage is entered upon and the season's work of the insect is closed. The date at which the fall brood deposit their egg varies with the latitude, that is, with the temperature, and hence we should expect to find the insect depositing its eggs earlier in the northern part of the Territory than in the southern part. Knowing this date in any given latitude wheat should be planted so late that the insect will be forced to deposit the egg in some other grass in the neighborhood. If late sowing proves impossible or is not advisable for any reason then it will be of advantage to pasture the early sown fields. All the stubble that is standing after the crop is harvested in the summer should be burned as in this way all the larvae that are found in the stems in the "flax seed" stage will be killed and the numbers of the fall brood greatly reduced."

PLUMS AND PLUM CULTURE.

Every horticulturist will welcome the new book on Plums and Plum Culture, written by Prof. F. A. Waugh, and just published by the Orange Judd Company. Professor Waugh has made a study of plums for many years. His first introduction to the plum was when as a boy on his father's farm in McPherson County, Kansas, the plum thickets among the sand hills of the Arkansas were visited for a supply of the fruit for the pioneer family. The pioneers of central and western Kansas enjoyed this fruit and could never cease being astonished at the prodigious crops borne by the little bushes. These have grown and fruited for ages—nobody knows how long. When in 1541-2, Coronado and his followers visited the land that now is Kansas they recorded their delight at the abundance of this fruit. But Professor Waugh's book has little to do with historical reminiscences. The Professor is an investigator and he has

found out about all that anybody has known about plums, and has developed a lot of new information on his own account. The book is exceedingly practical in its scope, and its arrangement is such as to make it a complete reference book on the plum. It is also an interesting book to read. It answers many questions which have puzzled the horticulturist. Not the least of these grows out of the fact that many varieties of plums are sterile to their own pollen. This subject is admirably treated, and tables are given showing which varieties may be mated to advantage. A diagram showing the relative dates of blooming should be valuable to all who are in danger from late frosts.

This book contains 371 pages, is beautifully printed, finely illustrated, and bound in cloth, and sold at \$1.50, for which price it will be furnished post-paid by the KANSAS FARMER.

CHEAPER THAN WAR.

There appears in another column of this number, a paper by the chief of the Bureau of Statistics, U. S. Treasury Department, suggesting a floating exposition of American products with which to show peoples of foreign countries the merits of what we have to sell. This kind of conquest of foreign markets is more in accord with the best American ideals than is shooting a portion of the residents of a foreign country as a means of promoting trade with those who remain alive.

What amount of money would be required to carry out Mr. Austin's plan is not stated, but that the sum would be less than the cost of the least expensive war that could be imagined will not be doubted by any one who has noted war expenditures.

In no other country is advertising so extensively and so judiciously done as in the United States. If this country shall, in the early years of the twentieth century, make a conquest of the commercial world by advertising, it will probably do more to teach the nations the futility of war than would be possible by a million sermons. After all excuses for war have been framed, it remains true in modern as in ancient times that greed more than all other causes is the motive that incites to these national conflicts.

Mr. Austin's suggestions are worthy of consideration from the view point of the humanitarian, the patriot, and the money-maker.

THE AGRICULTURAL COLLEGE PRESENTED WITH THE GRANDSON OF A \$1,000 HOG.

The Kansas State Agricultural College has just received a very fine Poland-China boar as a donation from A. M. Jordan, proprietor of Chinquapin Farm, Alma, Kans. This hog was sired by one of the best sons of Missouri's Black Chief. The later was sold to E. H. Ware, an Illinois breeder, for \$1,000. The grandam of this pig was Chief Perfection, also a \$1,000 animal. Every ancestor of this pig is reported as a first-class individual, and at the head of the college herd he will doubtless be the sire of some of the best Poland-China pigs in the United States. The agricultural college greatly appreciates Mr. Jordan's generosity and believes that he will be richly rewarded by the advertisement that will come from having so valuable a hog where it can be seen by the 1,300 students and numerous visitors. This makes the fourth donation to the agricultural college from enterprising Poland-China breeders of the State. Besides hogs the Kansas State Agricultural College has been the recipient of three pure-blood Herefords, one Shorthorn, and one Aberdeen-Angus.

A GOOD DEAL ABOUT ALFALFA.

Secretary F. D. Coburn has compressed within 163 pages about all of practical value to the farmer that is to be had about alfalfa. This marvelously valuable forage plant is making a rapid march across the continent from west to east and is revolutionizing the stock business wherever introduced.

Secretary Coburn has in this book fully sustained his reputation as a compiler of information. His instinctive good judgment has brought together answers to the hundreds of questions which have been raised wherever alfalfa has become a little known. The discussion of the feeding value of alfalfa is up-to-date in its recognition of the importance of protein in the ration. The important subject of alfalfa in its relation to crop rotation has generally been neglected by writers, but it is here treated with the common sense and lively interest which characterize all that Mr. Coburn gives to the public.

The book should be read by every

farmer who does not know the value of alfalfa, and will return in entertainment and information the 50 cents it costs to every alfalfa grower.

A GOOD OUTLOOK FOR SHORT-HORNS.

The demand for Shorthorns has grown very rapidly during the last two years and seems to be increasing every day. This has greatly enhanced values at both private and public sales, so that those breeders who have kept their herds up to a high standard of merit are reaping a rich reward. Many breeders of large experience and mature judgment think prices will go higher during the next year. The demand which has thus stimulated prices has been mainly a home demand, but recently some Shorthorns have been sold for export to South America and to Mexico.

There are rival breeds of great merit and the competition for public favor has been sharp, and at times fierce, but nearly one hundred years of trial has given the Shorthorn a strong hold on the esteem of the great mass of American stockmen, and he is moving grandly on in the ministry of good blood and the suppression of the "scrub." The future for Shorthorns is rich in promise and those who breed good cattle and give them intelligent treatment will surely not be disappointed.

WANTS COW-PEAS FOR PLANTING.

EDITOR KANSAS FARMER:—I want to get some cow-peas for seed. I have been watching for an advertisement in the FARMER but see none. Where can I get good seed, amount necessary for an acre, and the best variety? You can answer through the columns of the FARMER if you wish. B. J. Chanute, Kans.

Seedsmen can supply our correspondent. Doubtless there are farmers who have cow-peas which they would be glad to furnish at less price than the seedsmen charge. A small advertisement in the want column of the KANSAS FARMER, costing a few cents, would be the means of bringing together two farmers who might trade with mutual advantage.

The Whip-poor-will is the variety generally recommended for planting in Kansas. Plant 2 to 3 pecks to the acre in drills $2\frac{1}{2}$ feet apart, is the recommendation of the Oklahoma Experiment Station.

What the Man Would Do if He Were a Boy.

Bishop Vincent is credited with the following brief summary, which, if diligently put into practice will be found better than an insurance of success in life issued by the strongest company on earth:

"If I were a boy with my man's wisdom, I should eat wholesome food and no other and I should chew it well, and never 'bolt it down.' I should eat at regular hours, even if I had to have four meals a day. I should never touch tobacco, chewing gum, and patent medicine; never once go to bed without cleaning my teeth, never let a year go by without a dentist's inspection and treatment; never sit up late at night unless a great emergency demanded it; never linger one moment in bed when the time came for getting up; never fall, every day, to rub every part of my body with a wet towel, and then with a dry one; never drink more than three or four tablespoonfuls of ice water at one time. All this takes will power—and that is all it does take.

"If I were a boy I would keep my own secrets, except as I revealed them to my father or mother, for the sake of securing their advice.

I should not put unclean thoughts, pictures, sights, or stories in my memory and imagination, and no foul words on my tongue.

I would treat little folks kindly, and not tease them; show respect to servants; be tender toward the unfortunate—all this I should strive to do for the sake of being a comfort to people, a joy to my parents, and a help to the next century.

"If I were a boy I should play and romp, sing and shout, climb trees, explore caves, swim rivers and be able to do all the manly things that belong to the manly sports; love and study nature; travel as widely and observe as wisely as I could; study hard and with a will when the time came for study; read the best literature—works of the imagination, history, science, and art according to my taste and need, get a good knowledge of English; try to speak accurately and distinctly; go to college, even if I expected to be a clerk, a farmer, or a mechanic; spend my Sabbaths reverently; try to be a practical,

every-day Christian; help on every good cause; never make sport of sacred things; be 'about my Father's business,' like the boy of Nazareth; 'use the world and not abuse it;' treat old men as fathers, 'the younger men as brethren, the elder women as mothers, the younger as sisters, with all purity;' and thus I would try to be a Christian gentleman, wholesome, sensible, cheerful, independent, courteous."

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

For rotation, clover is one of the best crops.

A horse is never vicious or intractable without cause.

Poor fencing is largely the cause of breechy stock.

Feed horses that are subject to colic with considerable care.

Do not compel stock of any kind to drink stagnant water.

Any kind of live stock will decrease in value when cut short in their rations.

Of all domestic animals the horse is the one especially adapted to labor.

Nothing so disarms a drought of the power to injure as thorough tillage.

Other things being equal that farming pays best which produces the most manure.

A good mixture of grasses makes a better and surer pasture than any one variety.

While farming demands hard work and close attention labor may be wasted if not properly applied.

When an animal has the scours it is an indication of indigestion in some form.

As the length of a field is increased at the expense of its breadth more fence is required.

It is not the quantity of land one has but the way it is used and handled that determines the success.

Many cases of diseased feet with horses is the result of having left the shoes in too long.

Keep the pigs growing. There is no profit in the standing still system of pig feeding.

Until the steers are 2 years old they should be fed with a view of promoting growth, rather than to fatness.

By commencing the cultivation very early not only will it be easier to keep down the weeds, but the plants will secure a more vigorous start.

All things considered the best crop to grow in a young orchard is corn, taking pains not to plant too close to the trees.

The health of the horse depends largely upon the cleanly condition of his skin; on this account regular grooming is very essential.

Even when the pigs are on good pasture it will pay to provide them with a good clean shelter under which they can lie when they desire to sleep.

One advantage in early and thorough cultivation is that it aids materially in making the plant food in the soil available for the use of the plants.

With all newly set small fruit plants and trees it will nearly always be found advisable to cultivate thoroughly during the early part of the growing season and then mulch before the dry weather sets in.

Pawned His Watch for Dinner.

Many of our well-known millionaires have a habit of going about New York with only a few cents of change in their pockets, and perhaps none carries less of the coin or the realm than Henry Clews. Not long ago he and Mrs. Clews dined at a place where the banker-broker-author was unknown, and where the rule is strictly cash down. Knowing that his good wife generally had sufficient money in her purse to defray any ordinary expense, he whispered when the finger-bowls were brought: "My dear, will you lend me enough to pay for the dinner? I forgot to bring any money." But Mrs. Clews, too, had forgotten to bring any money, and there sat this delectable couple with millions at home, but not a cent for hotel tribute! The banker's explanation to the waiter was not regarded as satisfactory, neither did the house understand. The proprietor, a fellow without discernment or tact, was so inclined to be incredulous that Mr. Clews disdaining a controversy, quietly deposited his gold watch as a pledge that the bill should be paid as soon as he could send a messenger from his home. In getting into this scrape Mr. Clews is not singular. Other millionaires have had similar difficulties. There is a well-told story that John D. Rockefeller, happening to find his pockets empty, once permitted a stranger to pay his fare on the elevated road.—New York Press.

The Veterinarian.

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

Bog Sprain.—I come for a little information in regard to a colt about 1 year old. It is a bay, male, and has enlargements on both hind legs about where a blood spavin comes. Enlargements are soft like wind puff, and about the size of a lemon cut in halves, or smaller. They are of about three months standing. Colt is the making of a good 1,500 pound horse and would like to cure him if possible. He is not much lame, if any. McCracken, Kans. CHAS. ELIAS.

Answer.—This will all leave in young big bred colts without treatment, and only takes time.

Parasitic Bronchitis.—Can some of your readers tell me what causes the thumps or heaves among small pigs, and what is good for it? I have it among my pigs. They are about one month old. They get very fat before they take it. They do not last over five or six days till they die with it. The sows get a slop made from cooked Kaffir-corn meal, with a little oil meal mixed, with Kaffir heads for dry grain. The beds for the pigs are all cleaned out every two or three days and fresh put in. OLIVER IOTT.

Paxico, Kans.
Answer.—It is sometimes caused by a small worm in the bronchial tubes and lungs. Let them inhale sulphurous acid gas in a comparatively tight shed or barn by sprinkling a little sulphur over live coals for about fifteen minutes once a day, and give them about a teaspoonful of turpentine once a day in a little milk to drink.

Worms.—I have 6 pigs about 12 weeks old running with the sow yet. Their toes seem to turn back. They seem to be very nervous, as they keep jerking and have no control of their hind parts. When they run they fall down behind. They sit down while eating or drinking. They have only been this way a short time. A READER.

Hutchinson, Kans.
Answer.—Give them $\frac{1}{2}$ teaspoonful of turpentine and 5 grains of santonin to each in a little milk once a day for four days on an empty stomach.

Abnormal Growth.—**Ruptured Pig.**—**Trouble after Castration.**—1. I lost a pig some weeks ago that was afflicted with a white growth on the jawbone or gums inside the mouth. The white substance was quite tough, seemed to grow from the bone, but extended later to some of the fleshy parts of mouth and lips. The pig disappeared, and I suppose died. I now have another one from the same litter, 3 weeks old, a very fine, growthy fellow, that is affected in the same way. The lip is much swollen next to the sore and he sucks with some difficulty. I used tincture of iodine on the first case and am using water and carbolic acid in about the proportion of 3 to 1 to touch affected part with.

2. I have a 3 weeks old pig that is ruptured. I have held him up and gently reduced rupture with fingers and testicle would follow line of rupture down to belly. As he is a very fine pig, eligible to record, I would be glad to save him for a breeder. Can he be cured without calling in a veterinarian?

3. I have a steer calf that was castrated last fall just before a long cold, rainy time and he has not healed yet. Scrotum seems to be swollen and discharged white pus when exercised.

Answer.—1. Touch the growth with a pencil of lunar caustic once a day.

2. Have a qualified veterinary castrate the pig, as it would be hard to have without, and besides, it is hereditary, and a good number of his pigs would likely be the same way.

3. Have him opened up and remove all of the cords and covering left there, making good free openings.

A Severe Blow.

"That will be a popular song," commented the composer's friend. "Is it as bad as that?" groaned the composer.—Detroit Free Press.

Subscribe for the Kansas Farmer.

Horticulture.

Nitrogenous Fertilizers for the Garden.

Whatever question there may be as to the profit of using commercial fertilizers for ordinary field crops, there is very much in their favor for the garden. The following summary of experiments is given in Farmers' Bulletin No. 124, United States Department of Agriculture:

When the farmer buys commercial fertilizers for his fields, the cost of growing crops is considerably increased. A direct cash investment is made, the returns from which may be much or little, depending to a great extent upon the knowledge of the buyer in the use of such fertilizers. Soil in fair condition as regards the essential elements of fertility and given over to the culture of ordinary staple crops may give profitable yields only when medium amounts of fertilizers are used, while the profit obtained from growing certain high-priced garden crops on rich soils may be greatly increased by heavy applications of the most expensive forms of fertilizers. Some of the many problems involved in the economic use of the different forms of the essential constituents of fertilizers—phosphoric acid, potash, and nitrogen—have been worked out by the experiment stations; stages. It is known that any surplus phosphoric acid or potash which may be applied to a crop will usually remain in the soil for the use of succeeding crops, while any surplus nitrogen is likely to be lost in the soil drainage water or escape into the air in the free state. The economic use of any large amounts of nitrogen in its different forms thus becomes a problem of considerable importance, especially since nitrogen is the most expensive of the three essential fertilizing elements.

A contribution to our knowledge of the profitable use of the different forms of nitrogen in the field production of early market garden crops has appeared in a bulletin from the New Jersey experiment station. The experiments reported were carried out on a rich truck-garden soil which annually received fertilizers far in excess of the amounts removed by the crops grown. The experiments were designed to furnish information as to the relative usefulness of nitrate, ammonia, and organic forms of nitrogen for crops "belonging to that class in which rapid and continuous growth are important factors in determining the profits to be obtained in the growth of the crop." The crops grown were table beets, tomatoes, muskmelons, sweet corn, potatoes, sweet potatoes, and certain forage crops. The experimental plots were well fertilized in each case with phosphoric acid and potash before the nitrogen was applied. The data given below relative to table beets, tomatoes, muskmelons, and sweet corn is herewith summarized:

Table beets.—With this crop the relative profitableness of increasing the amounts of nitrate of soda, one of the most available forms of nitrogen, was studied. The soil used was a well-drained sandy loam, which had been cropped for ten years with table beets and celery and each year had been fertilized with 20 tons of well-rotted barnyard manure and 1 ton of complete commercial fertilizer furnishing 52.5 pounds of nitrogen, 110 pounds of available actual potash per acre. The nitrate of soda was applied on different plots of this soil at rates of 400, 500, 600, and 700 pounds per acre in three equal dressings.

The earliness of the crop was greatly hastened by the use of the nitrate. At the first picking the average yield of 2-pound bunches from the nitrate plots was 63 per cent greater than from the check plots. At the gathering four days later, this yield was 135 per cent greater, and at the third gathering three days later, 17½ per cent greater. From that time on the yields of the different plots were about equal. The different amounts of the nitrate increased the extra earliness of the beets from 10.1 per cent, in the case of the plot receiving the least nitrate, to 23.7 per cent in the case of the plot receiving the greatest amount, though not in regular ratio. The largest prices were received for the earliest gatherings, and the greatest net gain per acre over the control plot—\$27.10—was obtained from the plot fertilized at the rate of 700 pounds in nitrate of soda per acre. In this experiment, for every dollar invested in nitrate of soda nearly \$3 was returned in the increased value of the crop. "The experiment strongly emphasizes the importance of the sufficiency of available nitrogen for crops of this class, as well as the profits that may be derived from such applications."

Tomatoes.—This experiment was planned to study the comparative value to the tomato crop of nitrate of soda, sulphate of ammonia, and dried blood as sources of nitrogen. The effect of the different fertilizers on the yield and quality of the crop for early market was the prime object of the test. Nitrate of soda was used at the rate of 150 pounds, sulphate of ammonia 120 pounds, and dried blood 200 pounds per acre.

The use of all forms of nitrogen resulted in a large increase of fruit.

The yield from nitrate of soda was 12 per cent greater than from sulphate of ammonia, and 68 per cent greater than that from dried blood; it was, in fact, as large as could be expected from the entire use of all the nitrogen applied in this form, while in the case of the other forms the plants were unable to appropriate it rapidly enough to permit of a maximum development of fruit. * * * The net gain from the application of 150 pounds of nitrate of soda, costing \$3, was \$160, or a return of \$53.33 for every dollar expended; from sulphate of ammonia, \$132.77, or a return of \$44.26 for every dollar expended; and from dried blood, \$67.65, or a return of \$22.55 for every dollar expended.

The influence of the different forms of nitrogen used on the development of the fruit is noted.

The nearer the plant is normally fed the larger will be the proportion of perfect fruits, and while in crops of this sort the aim is to obtain the largest amount of early crop, it is shown that the largest total crop, the largest early crop, and proportionately the fewest imperfect fruits on the plot upon which nitrate of soda, the immediately available form of nitrogen, was used, and that the proportion of culls increased as the rate of availability of the nitrogen applied decreased. The largest percentage of imperfect fruits on the fertilized plots was produced on the plot upon which dried blood was used.

It is not likely in actual practice that progressive farmers would attempt to grow tomatoes without an application of nitrogen in some form, but it is a fact that too many use too little and are not particular to obtain the quickly available forms. These results show not only the great importance of an abundance of nitrogen, but the very great value of the readily available forms.

Muskmelons.—The same fertilizers as were used in growing tomatoes were used in growing muskmelons, the relative value of increasing amounts of each fertilizer for this crop being tested. Beginning with 150 pounds of nitrate of soda, 120 pounds of sulphate of ammonia, and 200 pounds of dried blood in the first series these amounts were increased 1½ and 2½ times in the second and third series, respectively.

A study of the results shows that a very large increase in yield was obtained from the use of the different forms and amounts of nitrogen. The best yields were obtained from the nitrate of soda in all the series, and with the exception of series 1, the yield from the dried blood was superior to that from the sulphate of ammonia. The average increased yield in the three series from the use of nitrogen as nitrate was 1,762 pounds per plot, or 115 per cent; the average increased yield from the use of nitrogen as ammonia was 1,331 pounds per plot, or 87 per cent; and the average increase from dried blood was 1,398 pounds, or 91 per cent—that is, the gain of 115 per cent from the nitrate was 24 per cent greater than from the dried blood and 28 per cent greater than from the sulphate of ammonia. * * * While the application of nitrogen resulted in an increased yield in all the series, the best results were in all cases obtained from the smaller quantity used in series 1. * * * the relative returns per unit of application being 100, 86, and 79 for nitrate, ammonia, and organic nitrogen, respectively.

The amount of nitrogen applied in [series 1] apparently encouraged a normal development of the plant in all directions, resulting in a proportionately larger yield of fruit than when the larger quantity of nitrogen was applied, and which apparently resulted in the increased growth of vine at the expense of fruit. This decrease in the yield with the larger quantity was more noticeable in the case of the sulphate of ammonia than with either the nitrate of soda or the dried blood.

The largest values in all cases were obtained from the nitrate plots, and the smallest application in series 1 was the most profitable. "A very decided decrease in values followed from the application of the different forms of nitrogen in excess of the amount applied in

series 1, and was greatest in all cases with the largest amount in series 3." The data furnished show that "nitrate of soda, when used in relatively small amounts, affects earliness in a more marked degree than the other forms."

With regard to culls, it is stated that "the percentages of culls on the nitrate plots were in all cases very much lower than from the plots treated with the other forms of nitrogen, and only in the case of the very large application of this form did the percentage of culls reach that of the other forms, even when they were applied in what may be termed normal amounts."

Sweet corn.—The experiment with sweet corn was made with the same kinds and amounts of fertilizers as were used in the experiment with melons.

The addition of nitrogen in the different forms, as well as the different amounts applied, resulted in an increased yield in all cases. The average increased yield [of ears] from the use of nitrate of soda was 21.1, from sulphate of ammonia 25.4, and from dried blood 34.9 per cent.

The increased yield was, with but one exception, greatest with the heaviest application of nitrogen. It is thought that the better results given by the dried blood in this experiment may be due to the soluble nitrates having been carried in the early season beyond the reach of the roots. Medium applications of fertilizers were most effective in increasing the yield of stalks, and sulphate of ammonia proved more efficient for this purpose than either of the other two forms tested.

This experiment, while less striking in its results than the others, is interesting in that it shows the relative influence of different forms of nitrogen for this crop, as well as the financial advantage resulting from the abundance of all forms of plant food.

The results of these experiments suggest the value of fertilizers on rich, well-tilled soils and the desirability of using the best forms of nitrogen on those crops "which, to be highly profitable, must take rapid growth in the early season, before soil agencies are active." C. B. SMITH.

Production of New Plants.

Undoubtedly the greatest progressive influence in modern horticulture, and in some respects perhaps in modern botany, rests in the creation or production of new beings, the production of something which has a distinct individuality which is capable of multiplication and which in some important attribute is entirely distinct from anything that we already have. The history of gardening as an advanced art does not date back more than a hundred and fifty years; true, plants were collected and cultivated prior to that time, but chiefly for their medical properties, real or fancied. A hundred and fifty years ago Linnaeus was unraveling the mysteries of plant relationships and building up his remarkable system of classification which, with all its unnatural grouping of dissimilar plants, was so wonderfully perfect in practical application. From that time up to within very recent years, great efforts have been made in the introduction of new plants from all the four corners of the earth.

The botanical collector, so-called, who in reality was a trade hunter of merchantable curios, has penetrated into nearly all the known regions of vegetation, with the result that we have around us to-day practically all the gems of foreign lands for the embellishment of our gardens and greenhouses. So earnest indeed has been the hunt for new plants that we may fairly assume to-day the practical exhaustion of native florae.

It is only but a few years ago that the expression "new plant" actually meant, without any qualification, a new introduction from a foreign land. The world moves! With the possible exception of the orchids, such method of increasing our present stock can not be largely counted upon. The new plant of to-day is becoming more and more recognized as an artificial production, a manufactured article. The scientific investigator and the practical operative have realized the force that comes from union and with the marriage of the field and the laboratory, a new era of activity opens before us; the profession of horticulture becomes more and more of an art and less of a trade.

The force that this manufacture of new plants is to-day may be realized by a look into any garden—the roses, the chrysanthemums, the carnations, indeed all our most valued flowers, fruits, and vegetables, are the result of artificial production! Some purely accidental, especially in the older days, but at the present time hybridization is

Catarrh

poisons the blood, irritates the nerve-cells and causes aches and pains in the temples, eyes, brain and spinal cord. Headache, neuralgia, impaired appetite, indigestion, sleeplessness, nervous exhaustion and despondency all point to the weakened nerves that are crying aloud for renewed strength and health.

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resorted to by the go-ahead horticulturist. The first record of a clear understanding of sexuality in plants is placed in the year 1676.

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"No man is born into the world, whose work is not born with him—there is always work, and tools to work withal, for those who will."

Pecans in the North.

Last month a gentleman writing Major Holsinger seemed in doubt as to whether pecan trees can be grown in eastern Kansas.

As to their growing in eastern Kansas, there can be no doubt about it when they are found growing by nature's panning here in latitude 41 1/2.

miles above Davenport (one of these trees was over 2 feet in diameter), to procure nuts for propagation.

How many of these are growing at this time I do not know, but the four sent to Mr. C. G. Patten of Charles City, Floyd County, a little above latitude 43, passed safely through our severe winter of 1898 and 1899.

Thus we find it is possible to remove fruits and nuts to other and more trying localities, and that our good heavenly Father has made many laws that we can profit by, if we heed and use them.—Western Fruit Grower.

Government Crop Report April 1, 1901.

The April report of the statistician of the Department of Agriculture shows the average condition of winter wheat on April 1 to have been 91.7, against 82.1 on April 1, 1900, 77.9 at the corresponding date in 1899, and 82.9, the mean of the April averages of the last ten years.

While the general average of condition, 91.7, is the highest since 1891, the presence of the Hessian fly is reported from an almost unprecedentedly large number of states, and serious misgivings prevail, even in states reporting a fairly high condition on April 1.

The average conditions of winter rye on April 1, was 93.1, against 84.8 on April 1, 1900, 84.9 at the corresponding date in 1899, and 88.3, the mean of the April averages of the last ten years.

Pending the forthcoming publication of the census report on live stock, which will be used for the verification or correction of the department's figures for the year 1900, the statistician has temporarily discontinued his own estimates of the number and value of farm animals.

Condition of winter wheat and winter rye on April 1, 1901, 1900, and average for past ten years.

Table with 5 columns: States and Territories, Winter wheat 1901, Winter wheat 1900, Winter wheat years, Winter rye 1901, Winter rye 1900, Winter rye years. Lists various states and their crop percentages.

United States... 91.7 82.1 82.9 93.1 84.8 88.3

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In the Dairy.

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

Prizes for Holstein-Friesians at Pan-American Exposition.

Under the authority delegated your committee the following special prizes have been offered for stock of the Holstein-Friesian breed, to be paid by the Holstein-Friesian Association, viz:— First, to duplicate all prizes offered by the Pan-American Association as given above, also a prize for a young herd, consisting of one bull and four females under two years of age, also for bull and three of his get, and also for a cow and two of her produce, each as follows First prize, \$50.00; second, \$25.00; third, \$12.50; fourth, V. H. C.; fifth, H. C., and still further to offer prizes amounting to \$175.00 to practically illustrate upon the exposition grounds the system now in practice by the Holstein-Friesian Association of America for making official butter records. The test to be made as nearly as possible under the present rules of the association for such tests, to be made by the Babcock machine, under the supervision of some officer, or professor of some agricultural college or experiment station, who is to be selected by the Holstein-Friesian Association, and who is to be assisted by a committee of three, also selected by said association; the cows be milked three times per day and the inspection to commence one milking preceding the commencement of such test, and the test to continue for one week; the cow showing the largest production of butter fat and butter at 80 per cent fat, during such period, to be awarded the first prize of \$100.00, the second largest the second prize of \$50.00, and the third largest the third prize of \$25.00. It was still further decided to offer the following prizes for the largest production of milk for one week to cows of the Holstein-Friesian breed, in charge of the committee referred to above, as follows: First prize, \$50.00; second, \$25.00; third, \$12.50. No prizes in this class are to be paid where the yield of milk of any cow does not average at least fifty pounds per day during the continuance of the test.

All animals competing for the above prizes must be recorded in the herd books of the Holstein-Friesian Association of America. These special prizes amount to nearly \$1,100, which in addition to the awards made by the exposition, should insure an exhibit of Holstein-Friesian cattle such as has never before been witnessed in America, and it is to be hoped that every breeder who has stock worthy of such an exhibition, will see that it is properly fitted and exhibited. It is the wish of the committee that no pains be spared to make this exhibition one worthy of the occasion and of the great breed which we represent.

- E. A. POWELL, W. A. MATTESON, L. T. YEOMANS, W. B. BARNEY, D. H. BURRELL,

Pan-American Committee Holstein-Friesian Association of America.

Some of the Advantages of Dairying on the Farm.

H. J. RICH.

In taking up this important subject, I will try to show a few things in dairying that are an advantage to the farm and farmer. The first and most important question is: Does it pay to milk on the farm? I know of no better way to show that it does pay than to tell you what my cows did for me the past year. I will give you the facts just as I have them in black and white. My herd of cows are considerably below the average cows in this locality; that is, a person looking them over would say they were not very good cows although some of them show the dairy form.

From fifteen cows my cream checks for the past year amounted to nearly \$400 or an average per cow of about \$26 for butter fat alone besides fifteen calves that I think would bring \$15 per head any day; in fact, I would not take that for them. This would amount to \$225. Add that to the \$400, which would make \$625, or an average per cow of about \$42. Now I figure I raised the calves on the skim-milk and I had enough skim-milk, besides feeding the calves, to more than pay me for what ground feed they ate. Any one that has ever fed pigs warm skim-milk right from the separator knows something of its feeding value for pigs.

I have one individual cow in my herd where cream alone in one year amounted to \$53 and she raised me two calves in addition, or rather I raised them with her skim-milk. Her older calf is now about fourteen months old and her younger one is about three months, and I think the two calves would easily bring \$30, which would make a return from the cow of over \$80.

In regard to the feed, I gave very little grain; in fact my cows were handled just about the same as I would have handled them if I had not milked them. If I had fed them properly, my returns would have been a great deal larger. During the heaviest milk flow, it took two of us an hour and a half twice a day to do all the chores, including the separating of all the milk and feeding it.

I know that there are men in the dairy business that get more than double the amount I do, simply by breeding up their herds and handling them properly.

One great feature in milking is in the cream check every month, which comes like a pension and always in ready cash—which is quite an object, for when we depend on hogs and cattle the pay days are a long time apart, and when we get the money for them, all we can do is to give it a squeeze and pass it on to liquidate the bills that have been accumulating.

Another important advantage is the skim-milk, which is an ideal food for young stock, such as calves, pigs and chickens. It is a fine egg-producer, and very good for little chicks. It was a great advantage to me last spring for my early pigs and I am well satisfied with the calves I raised on it; in fact I think there is no other thing that will take the place of skim-milk for all young stock.

Another advantage, not a small one either, to our run-down land is the greater amount and better quality of manure produced by a dairy farm. Then also the dairy farmer to be successful must raise the clover, soy-bean, cow-pea, and other leguminous plants, and pasture more of his own land, which tends in no small way to renew his land.

For the young man and the man of small means, the ones just starting or trying to get a start in this world's goods, it seems to me it is the surest method of making it win as there is not so much money invested and the risk is not so great as with fattening cattle. If he has a herd of cows they pay as they go, pay for their keep, pay for the groceries, pay the hand, raise a calf and several pigs, make the hens lay, and supply the table with two of the most healthful foods—butter and milk. In fact it seems to me that dairying on the farm is the happiest combination imaginable to make things grow and go. And to make things go is what we are all trying to do. Then when we have one of our droughty years and our crops are short, they are never so bad but that we raise roughness and some grain, enough to get along with our dairy herd. But the one that depends on fat stuff for his money has nothing of the sort to fall back upon. It is a noticeable fact that when we experience hard times, the dairy industry expands and when times are easy and money plenty, it goes down. Think about this. It can only mean one thing; that is, it pays to milk, especially in adverse conditions.

Experiences With the Skimming-Station Run on Commission.

Mr. H. W. McKinstry, superintendent of the Manhattan division of the Continental Creamery Company, has 17 skimming-stations under his control. During the month of March, 9 of these skimming-stations were operated on the salaried plan and 8 on the commission plan. Mr. McKinstry reports that the salaried men received \$20 in wages for the month's work while the men working on commission received an average of \$32. Three thousand pounds more butter fat was received from the 8 commission stations than came from the 9 salaried stations. It cost the company three cents a pound to lay the butter fat down at Topeka from the salaried stations, but only 2 1/4 cents from the stations run on commission.

The Absent-Minded Professor.

The nurse excitedly and joyously announces an interesting family event that the absent-minded professor has forgotten all about. "Professor, a little boy!" "Well, ask him what he wants." —Philadelphia Times.

To make cows pay, use Sharples Cream Separators. Book "Business Dairying" and Catalogue 237 free. West Chester, Pa.

BIG USERS OF CREAM SEPARATORS

The Continental Creamery Co., Topeka, Kan., uses 175 De Laval Power separators. The Elgin Creamery Co., Chicago, uses 150. The Borden Condensed Milk Co. uses about that many. The Beatrice Creamery Co., Lincoln, Neb., uses 135.

The Franklin County Creamery Association, St. Albans, Vt., uses nearly 100. So does the Standard Butter Co., Owego, N. Y.

The Brady-Meriden Creamery Co., Kansas City; Parker Creamery Co., Hutchinson, Kan.; and John Newman Co., Elgin, Ill., all use over fifty machines each.

The St. Marys Creamery Co., St. Marys, Ont.; Fairmont Creamery Co., Fairmont, Neb.; McCanna & Fraser Co., Burlington, Wis.; Belle Springs Creamery Co., Abilene, Kan.; Forest Park Creamery Co., Edgerton, Kan.; and the Hesston Creamery Co., Newton Kan., all use from 25 to 50 machines.

All these are large Power machines, costing \$500. to \$800. each. In addition some of these concerns have hundreds of "Baby" De Laval machines scattered among their patrons.

Every concern named, as well as every other large user of separators, now uses and purchases De Laval machines exclusively.

THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS., CHICAGO. General Offices: 1102 ARCH STREET, PHILADELPHIA. 103 & 105 MISSION ST., SAN FRANCISCO. 74 CORTLANDT STREET, NEW YORK. 327 COMMISSIONERS ST., MONTREAL.

A Few Kansas Object Lessons.

A common remark amount a 'good many farmers is "Experience is the best teacher," and doubtless there is nothing that appeals to the farmer

more strongly than an object lesson from one who is engaged in the same manner of work under practically the same conditions. Kansas is not without her successes along dairy lines and a few of these are submitted herewith:

A YEAR'S RECORD OF TWENTY-FIVE KANSAS HERDS.

Table with columns: Name and County, No. of Cows Kept, Average Per Cow—Butter Fat Income. Lists 25 herds with their respective statistics.

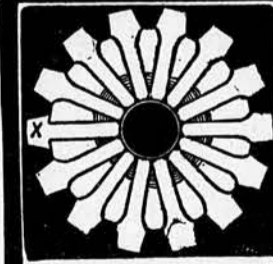
Breed Prizes at Pan-American Exposition.

The Pan-American Association has offered prizes for the various breeds of live stock to be exhibited from September 9 to September 21, as follows:

Table with columns: Prize, First, Second, Third, Fourth, Fifth. Lists prizes for various categories like Herd, Bull, Cow, Heifer, etc.

SWEEPSTAKES.

- 10 Bull, any age..... Medal
11. Cow, any age..... Medal



The Studebaker HUB.

The foundation of the wheel is the HUB. Our hubs, which are made from specially selected timber, are each scientifically treated with the Studebaker Filler before the spokes are driven, rendering them absolutely impervious to moisture, and making a safe guarantee against checking or loose tires in any climate. Over 50,000 sold in 1900 and more than One Million in Daily Use the world over, testifies to the superior points of construction in the Studebaker Wagon. Ask your dealer for The Twentieth Century Studebaker. Insist upon it. If not there write us direct, and we will tell you where you can get it and why it is the Cheapest Wagon for you to use.

STUDEBAKER BROS. MFG. CO., South Bend, Ind., U. S. A.

Grange Department.

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

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

National Grange.

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

Kansas State Grange.

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

General Topic.—Education.

The corner-stone upon which the grange structure rests is education. We would not in the least degree belittle the financial advantages of the order, for we have previously called attention to them and urged the advisability of developing the cooperative business features of the grange both in the matter of buying and selling; neither do we fail to appreciate the great importance of the legislative possibilities of the order, for we have just devoted three months to the consideration of legislative matters; the social and fraternal features of the grange are prized as highly by us as by any one of the half million members enrolled under our banner, but over and above all these, and in fact an important factor in the promotion of either of the features we have named, is the great and all-powerful educational force of the order, lifting the grange from the plane of those organizations that depend upon numerical strength alone for influence and place to the level of the most respected and successful organizations that rule by mental, rather than physical, strength. The entire list of aims and purposes of the order may almost be included in the word "education." Education in buying and selling; education in pending legislative matters and in the ways and means of reaching legislators; education in the formalities and courtesies of well-bred manners and social etiquette; and education that reaches the heart, causing it to beat with accelerated action towards the members of this great fraternity and with special force for the brothers and sisters assembled every fortnight around our grange altar in our grange hall. Financial, legislative, social, and fraternal advancement through grange influence is the result of education along those lines.

The education to which we desire to direct the attention of the order during the three months upon which we are just entering is the common acceptance of the term known as mental development with such additional matters as will enable our members to conduct their business in a more intelligent and, therefore, more profitable manner. We have particular reference to the education imparted, either in the grange, the school, or the agricultural college, that broadens one's mental vision and increases one's mental capacity while, at the same time, it instructs in the science of agriculture and in the arts that adorn the home necessary to make it the brightest and happiest spot on earth. We need more practical, and less ornamental, instruction in all our educational work. We need to make our grange educational work more practical. Our schools should include instruction in subjects close around us and in which we have to deal every day of our lives, and our agricultural colleges should educate more boys toward the farm and less away from it into other industries and the professions. These are the matters of education that we would like to consider with members of the grange during the quarter and to which we invite earnest attention.

Suggested to the Lecturers.

The interest and usefulness of the grange may be multiplied many fold by the lecturers choosing from the membership persons to correspond with the officers of the experiment station. Select those who are particularly interested in the subject assigned, or who would be apt to give the matter the attention its importance demands. Gain the consent of the persons to take charge of the work before you speak of it in the grange. Select for horticulturist one who takes particular interest in fruits and vegetables; for agriculturist an intelligent, observant farmer; for entomologist a boy or girl particularly interested in insects. Let him report on the insects of that locality. If he does not know the names, let him send specimens to the experiment sta-

tion for identification. The small expense incurred could be properly borne by the grange. To preserve specimens of most insects place them in small bottles and cover with alcohol. An observant member should be made botanist. He should be able not only to identify the native plants, but those that have been introduced. A short report from one or more of these superintendents of departments could be made at each meeting and a special report when any unusual phenomena presents itself.

In this way the grange will be familiar not only with its local surroundings, but it will be brought in close contact with the experiment station. Both results will be highly interesting and beneficial financially. The more we know of the conditions surrounding us, the better we can distinguish our friends from our foes; the greater knowledge we have as to the best way of conserving the good and eradicating the bad, the more money will we earn on our capital invested.

Now, don't make that time-worn excuse, "No one here cares for anything of this kind." There is no neighborhood but what has some who do care. Some who, by a little intelligent direction and sympathetic help would do wonderful things in the world of progress. It is from just such neighborhoods that you say have no one who cares that our big-hearted, brainy men and women come. Some one or some book or incident gave them an idea, and they pursued it and became the great men and women who did so much to make the past century remarkable.—Mrs. Mary E. Lee, in Farm and Fireside.

A Bad Liver and Free Delivery.

Occasionally we find a farmer who is upside down and can see no good in anything, and above all he can find nothing for the farmer in the future but what is "black." This always makes me weary and I simply say he's got a bad liver "bad liver" and let it go. The latest was soured on free delivery of rural mail and all because he had discovered that the town carrier got more pay than the country carrier. I admit in the start that I do not see why for eight hours' work the city carrier should receive from \$800 to \$1200 per year and furnish nothing, while the country carrier gets \$500 for his 25-mile drive and furnishes his own horse and wagon. But this in time will be adjusted. We have had free delivery of rural mail only four years and over 3,000 routes have been established and 2,000,000 farmers and their families enjoy the benefits of the service; 2,500 new routes are asked for and will be put in operation as soon as possible. The rural population is estimated at 24,000,000 people, 3,000,000 of whom live in such sparsely settled communities as to be practically inaccessible to carriers. The remaining 21,000,000 occupy 1,000,000 square miles of territory. The gross cost of delivering mails to them is estimated at \$21,000,000 a year. The Postmaster General says if the loss on second-class matter were stopped it would be sufficient to give free delivery to all accessible country people. Almost every farm house in Great Britain, Belgium and France is reached by the postman. In other European countries there are rural deliveries but the carrier collects a fee. But nowhere is there a free system over such a wide area as the greater part of the United States. Give Uncle Sam time and he will have the finest system in the world and it will be free. In the meantime we hope the liver of the pessimistic farmer will improve so he can enjoy what is in store for him.—Exchange.

As Others See Us.

The state of Kansas in common with most of the western states has not as many thousands of farmers in the grange as in the early boom days of the order, but she has survived the reaction, and on general lines of grange work is "holding her own."

In one particular, however, Kansas leads and presents an object lesson to farmers and patrons everywhere; and that is in business cooperation. In fact, Kansas patrons have made this a sort of specialty, and well are they succeeding.

Here are some figures, which as examples of what can be done, are full of encouragement and well worthy of emulation.

The Osage County Cooperative Association, at Overbrook, Kans., doubled its capital stock last year, and its sales amounted to \$38,700, a gain of \$8,700 over the previous year.

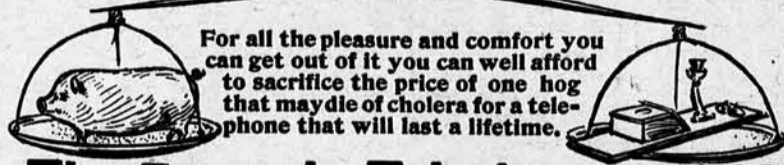
The Patrons' Cooperative Association of Linn County, sold goods to the amount of \$37,000 last year, a gain of \$4,000. This association was organized

Your Hog for

Connect your house with your neighbor and town.

Our Telephone

To call the doctor, the grocer and everybody.



For all the pleasure and comfort you can get out of it you can well afford to sacrifice the price of one hog that may die of cholera for a telephone that will last a lifetime.

The Farmer's Telephone Costs You \$11

It's yours. You own it for life without making any further payments. Not controlled by any trust. No rent to pay. Wire and poles at lowest prices.

AGENTS WANTED

—to solicit farmers in neighborhoods not already taken. Thousands in use. Sell wherever shown. Best thing for the farmer ever invented. Write for special terms to agents, booklets, etc.

Send us your name and that of your nearest neighbor and the shortest distance from your house to his and we will send you full particulars and facts on Telephone construction worth while knowing.

KELLOGG SWITCHBOARD & SUPPLY CO., 222 S. Green St., Chicago.

in 1876, and since that time has paid \$10,000 in dividends.

The Johnson County Cooperative Association was started at Olathe, in 1876, with a capital of \$800. It is modeled after the Rochdale system of England, as published by the National Grange early in its history. It has been a success from the start. June 10, 1886, the corner stone of its new store was laid. The building was 118x120 feet on the ground and 3 stories high. In 1898, an annex 36 feet wide and 2 stories high was added.

The association handles groceries, dry goods, clothing, hardware, farm implements, harness, etc. The annual sales now reach \$240,000 and the average gain is about \$10,000 a year. Total sales since organization, \$5,126,131.43; returned to stockholders on capital \$125,908; rebates to patrons on purchases \$219,795. Four branch stores are operated in different parts of the county, each carrying a stock of goods valued at about \$7,000.

Who, after reading this, can say that farmers who improve the education and possibilities of the grange are not able to do business in a successful business way?—Grange Bulletin.

The quarter just closed has been an eventful one in grange circles. In one sense it is the harvest season of the year on account of the increase of membership during the winter months and the assembling of legislatures in many states where the legislative work of the order is shown in just laws enacted and vicious legislation defeated. Congress has also been in session and the influence of the order was shown in the action of that body upon various questions of national importance. The most prominent of these were the Grout Bill and the Ship-subsidy Bill. This organization never made a more vigorous fight in legislative matters than for the passage of the former and defeat of the latter. Letters, petitions, and personal appeals poured in upon senators in vast numbers from all sections of the country. The Grout Bill passed every stage except the final vote, which would have been favorable could the bill have been reached. While we are grieved at the failure in this matter when victory was almost within our grasp, we rejoice that our efforts for the defeat of the iniquitous and far-reaching ship-subsidy bill were crowned with success. The unanimous expression of this organization contributed in a large degree to this gratifying result.

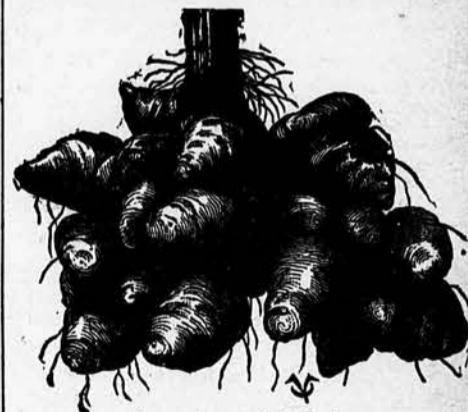
The quarter upon which we are entering will be equally as eventful, but in a far different direction. Three events of importance, namely, arbor day, children's day, and grange memorial day, will occur and should be observed by every subordinate grange from the Atlantic to the golden shores of the Pacific. Arbor day is appointed by the governor in several states, and where there is no such provision the master of the state grange can name a day for arbor observance. Children's day is appointed by the proclamation of the master of each state grange, and grange memorial day was established at the last session of the National Grange and occurs upon the 3rd day of June. It is the duty of subordinate granges to observe these events.

It is none too early to arrange for the series of field meetings or picnics that are held during the summer months in all the states. In order to have them successful they need to be planned a long time ahead, and if speakers are

had from abroad the meetings should be systematically arranged so as to enable speakers to get around with as little loss of time and as little expense as possible. The lists of these meetings in several states is already announced.

While these various occasions are important in sustaining an interest in the grange and extending its influence and membership, and should be encouraged and promoted, we should not lose sight of the fact that the subordinate grange meeting, even with but few in attendance, is the foundation of all grange work. This fact should impress all lecturers with the importance and responsibility of their position, and should stimulate them to do the best possible work and to make every reasonable sacrifice for the promotion of the educational work which they have in charge. The perfecting of the organization and increase of membership in a subordinate grange may probably be considered more especially within the province of the master and secretary, but the mental development and progress in educational matters devolves upon the lecturer. We should strive to make this the most successful year of all in this important matter, and the subordinate lecturer in the subordinate grange is the person and place where it will best be accomplished.

Think of some great, broad-minded character, admired by the nation or the world, and I will tell you that he is deep in his knowledge of good literature. If every farmer were suddenly to acquire a love for and knowledge of good literature, it would cure many of the social ills of rural life. It would cure our narrow-mindedness and discontent to realize that the world is broader than a neighborhood. It would cure envy and jealousy, for hearts that throb with the inspiration born of good literature must dwell above such pettiness. It would break down selfish conservatism and develop sympathy, charity and the social spirit.—Ohio Farmer.



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75 CENTS PER BUSHEL.

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Kansas Farmer's Handy Guide

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

CELLARS.

Cellar Drain Trap.—Make a box about the size of the drain pipe or tile, two or three feet long. Saw the end of the box, beveling about ten degrees. Take a piece of leather, not too stiff, the size of the end of box. Nail it flat on a square piece of board one inch smaller all around. Put nails one inch from edge of board. Now nail edge of leather to the short bevel end of box. Now over this valve end of box slip a short box, about one foot long, to protect the working of valve. Dig down and take out tile enough, and put these boxes tightly in place, with short bevel edge upward. All sudden high waters backing up will close the valve, and as soon as it goes down, the little water (if any) from the cellar will easily open the valve and escape. This is valuable for our flat prairie cellars. Have seen the water in big open ditch three feet higher than the cellar, and still the cellar dry. If any one wishes to see it work, they need not put a short box on end of valve box, but set a box over valve up to top of the ground.

Out-Door Cellar, Storm Pit or Root House is frost proof in coldest locations if roof is laid flat on ground or lower than the ground level. It is also more nearly cyclone proof.

Cyclone-Proof Cellar.—In this country, where cyclones and tornadoes frequently sweep over large sections destroying life and property, I think it is the duty of every man to provide some safe place where he can retreat with his family when the elements are threatening. I will try to describe how I built such a place in the cellar, which cost little more than my own labor and will be perfectly safe under all circumstances. I dug out an excavation seven feet wide and ten feet long on one side from cellar, and on the same level with cellar floor, built a stone wall on both sides and back end, fifteen feet thick, which left just four feet clear inside. When wall was six feet high a four-by-six sill was laid on the inside edge and a double course of three-inch planks was laid across from one sill to the other, spiked together and extending half way into the wall. All was carefully imbedded in mortar and wall built on to top of ground with a layer of stones and mortar, over planks and all, making it level with surface and solid as a rock. Then put in heavy timbers for door-posts and make a door of three-inch planks, swinging inward, to prevent being blocked in case cellar is filled up with debris, and the structure is complete.

Cellar Ventilation.—In a rigorous climate there are few farm-houses the cellars of which are secure against freezing without a thorough banking. This banking, as ordinarily done, does away with all ventilation of the cellar, except such as is possible through the rooms above. In these cellars there are stored in the winter months more or less fruit and vegetables, among which there is always some decay, the gases from which escape through the rooms above. Such cellars may be efficiently ventilated, if there are opposite windows, in this way: Make a four-inch or six-inch tube of boards to extend across the cellar overhead, projecting through the windows and banking at each side of the cellar with a slide at each end of the tube to be closed in extremely cold weather. Now have several half-inch or inch holes through the under side of the tube and you will have a good ventilator. If the windows of the cellar are not opposite, use two short tubes, long enough to reach through the banking and the cellar wall, to be closed by a slide at the end in very cold weather.

Care of the Cellar.—The glass windows that have been in during the winter should be removed in the spring, and suitable ones put in for warm weather. Make first a frame of hard wood, about one and a half by two inches, which can be easily slipped in and out of the casing, where it can be held in place by either buttons or small nails. Upon this frame fasten some netting, first placing a strip of wood upon the edge of netting, to make it perfectly secure. Also provide board shutters, size of window, hung on hinges, either at side or overhead. It is more convenient to have shutters upon the inside. Strips of leather can be used instead of hinges. Shutters to be closed during the daytime, to keep out the warm air, and open at night, thus allowing the cool, fresh air to circulate freely through the cellar. Re-

move all decaying vegetable substances from which arise poisonous gases, making the sleeping- and living-rooms unhealthy, causing disease. A little time spent in cleaning out the cellar may save many dollars in doctors' bills. Stone or cement for floor is more easily kept clean than ground bottom; also banish cobwebs and dust from the walls.

To Keep Cellar Cool.—Open windows at night and keep closed during the day. To do so quickly hinge sashes at top; take two cords of equal length, attach one end of each to lower part of sash, pass one through a small pulley in sill. Pass both cords through another pulley in joist over and two feet from window, similar cords for each window; now bring all cords to one convenient point. Put a hook for each cord; open and fasten window with upper cord; close and fasten with lower cord to hooks. This short cut saves many a step in hot weather.

CELERY.

Bleaching Celery.—Buy heavy wrapping-paper of a groceryman, lay wide board on ground each side of celery, lay paper on boards, double the paper three inches under the boards next to celery, turn boards up to celery and bank up, pressing down the dirt; lift out boards. This keeps out the dirt and the celery does not rust. It saves extra help. I have tried all ways of bleaching and this is the best.

Bleaching White Plume and Golden Self-Blanching Celery.—Make a cylinder four inches in diameter, 12 inches in length, of heavy paper, matting or pasteboard. Then when the celery is big enough, hold the tops together with one hand and put the "bleacher" over it with the other. I have tried this plan for years with complete success. When the celery is growing fast it will bleach up in two weeks fit for market. We can not bleach the late green this way, however.

Muhh Celery on Little Ground.—Prepare your celery bed in the fall, by using plenty of well-rotted manure and working it up well with the soil. Next spring, after the ground settles, work it fine with rake and sow your seed in rows 10 to 12 inches apart. Keep moist so as to get an even stand. After the plants are about two inches high, thin to about four or five inches in the row. Keep well cultivated and when it gets large enough to blanch, fill in between the rows with clean straw, or you may use tile or boards, whichever is the cheapest and handiest. If you get some good kind of self-blanching celery, such as White Plume or Golden Self-Blanching, it will blanch out very nice without any banking or shade except its own shade. I have a bed about a rod square. It is the White Plume variety and is nicer and whiter, without any banking or protection, than any I have seen in market recently.

Growing Celery.—A good way to cultivate and blanch celery is to set out plants in rows about three feet apart on the level ground, on good soil, fertilized with wood- or coal-ashes and hen-manure. Cultivate well until the plants have grown about six inches high, then set up boards on both sides of the row, close enough to keep the stalks upright. Put sawdust or well-rotted straw around the stalks to cover the ground. Always have the boards high enough to cover stalks, but not the tops. Heap dirt up even with the boards on the outside.

Growing Celery in Georgia.—Last year I planted the seed on the east side of the house, and it grew all right until I transplanted it. Then it did not live long. The sun was too hot. It was set between the rows of corn, but was a failure. This year I set it by the garden fence, where it had the morning sun, and where peas planted on the south side shaded it some. The peas were pulled up the last of June, and I had a framework of lath made for it, the lath about one inch apart, and it is growing finely. I pour plenty of suds on it every week. The idea of lath frame is not original with me. I have forgotten the name of the paper I saw it in.

To Raise Celery Cheaply.—Plant your celery between your sweet potato ridges, then when you dig your sweet potatoes you will have plenty of dirt to ridge your celery. Plant only every alternate row. Use the sweet potato vines next to celery in place of straw.

To Cook Celery.—Pour off water and cook in fresh water until done, then add a lump of butter, flour and milk or cream to make a nice gravy, season to taste. Celery that hasn't been canned may be cooked in the same way, and is splendid eaten with mashed potatoes or bread.

A Chewing Tobacco with a Conscience behind it - Wetmore's Best

—A CHEWEE'S PHILOSOPHY.

Wetmore's Best is made in the largest independent factory in America, by men who study and respect the wants of mankind. Wetmore's Best Chewing Tobacco is made on the principle that a man's chewing tobacco should be prepared as cleanly and carefully as his food. One chew will convince you. No premiums are offered. It's all in the quality. Ask the dealer for it.

M. C. WETMORE TOBACCO CO.,
St. Louis, Mo.



Short-Cuts in Raising Celery.—One of the hardest tasks in raising celery is the banking up for blanching. Some varieties are self-blanching, but some of them are not so crisp and tender as most people desire. The trenches may be dug close together, and the celery can be blanched by placing corn-fodder around it instead of earth. It will blanch nicely if boards are placed along the plants and the space around the plants is filled with earth. It will also blanch if the plants are wrapped in heavy paper. Celery will keep well in winter if the plants are put in a cellar with the roots in damp earth. A damp, dark place is better to keep it in than a dry one. To blanch endive, place the plants close together and then take a box which has the top taken off and invert it over the plants, and let it remain as long as is necessary to blanch it. It may also be blanched by tying the leaves together with a string.

Short Cut on Celery.—Took spent hot-bed, facing south. Raised the sides of bed six inches. Length of bed, 30 feet; width, six feet. Placed posts of two by four, seven and a half feet apart at the back and nine feet high; at the front seven feet. On these nailed a one by six board the length of bed, making framework for shade. Covered crosswise with one by four strips eight feet long, with four-inch space between strips, which gives you a shade roof, with two feet extra slope to the south. Gave heavy coat of cottonseed-meal, worked well into soil, saturated well. Planted celery seven by seven inches. Outlook promising. Have abundance of water. Shade can be varied as the heat advances. Affords a cheap supply of celery for the table in this trying climate. Will use for fall crops as well.

MISCELLANY.

A Cape to Put Head Through.—Take a square of heavy table oilcloth, cut a round hole about 6 inches across with a short slit on one side to slip over the head, to wear to ride or do chores in. Keeps rain off nicely.

Clearing Land of Bushes.—Get rope 50 to 100 feet long, 1 inch thick, 2 pulley blocks, double if saplings are over 3 inches in diameter, single will do if less. Lace up pulleys with rope. Fix one pulley to stout object, other to that which you want to remove, with a good stout chain. Hitch 2 horses to end of rope and pull. If you never tried this, it would surprise you to see how much better, easier and faster the work is accomplished.

A Low Farm Wagon.—Any farmer able to own two wagons should get the

second one a low one. The writer has one, front wheels, 22 inches high, hind wheels 26 inches high, no felloes on wheels; tires (3 inches wide, 1/2 inch thick), just set on end of spokes, and nailed on every other spoke. I use mine for hauling hay, grain, dirt, manure, wood, lumber, stones, posts, rails, and nearly every other thing on the farm. Hard on horses? Yes. A small wheeled wagon does pull a little harder, but would you make my back and nerves of secondary consideration to a horse? That's what horses are for, to lighten man's labor. I don't use my low-down wagon when I go to town or market, but just keep it right on the farm.

Easy Way to Harvest Carrots.—Top with a sharp spade or shovel, and then plow along one side of the row.

Hog Carrier on Rollers.—Have 4 pieces of hard wood 3 or 4 inches wide, 1 inch thick, and as long as the box is high. Round off the corners of one end of each, and bore 1/2-inch hole in rounded end for bearings of rollers. Nail one on each corner of box in a vertical position, extending far enough below the bottom to receive the rollers, which should be as long as the box is wide, and 4 or 5 inches in diameter, with 1/2-inch iron driven in center. Have a door at each end of box sliding in grooves up and down. Call in your hog. Lay a plank 8 or 10 feet long to wagon or sled and roll up. No hard lifting; no squealing. One man can load a 200 or 300 pound hog alone, and easier than 2 men could in the old way.

Pay Cash.—We pay cash for groceries, etc., using this plan: We keep 3 cows and 50 chickens. Milk is retailed in our village, and eggs are sold for cash. The proceeds from sales of milk, eggs, butter, apples, chickens, and other fowls are put in a small box and when we want to go to the store we first go to the cash box and get money. You must deal at a cash store, or else make the storekeeper allow you a percentage for cash. When the box is full, the surplus may be put to other use.

Nice Castor Oil.—To take castor oil without tasting, I first tell my little girl that it will not taste at all if she will do exactly as I bid her. She knows "mamma never deceives," and so obeys me trusting implicitly. I then have her hold her own nose tightly while she swallows the otherwise nauseous dose straight from the spoon; then, before loosening her hold, I have her rinse her mouth out with strong lemonade, as warm as she can drink it. She always drains the cup afterwards, and hands it back with the commendation, "that was good, mamma." I have taken it in the same way, only using hot water

instead of lemonade, and not tasted the oil at all.

Catarrh Cure.—The writer had catarrh for several years and tried quite a number of so-called remedies, but was benefitted but little, if any, until cured by the following simple and perfectly reliable treatment: One pound common starch, 1 pound pulverized sugar and 2 ounces burnt alum, all thoroughly pulverized and well mixed. Procure a small rubber tube 2½ to 4 feet long, ¼ to ⅝ inches in diameter. Take a quart of water slightly warmed, in which a pinch of salt has been dissolved. Place the vessel containing the water on a shelf above your head, insert rubber tube and start flow of water by sucking the other end, insert end of tube in one nostril and then thoroughly wash out nose, letting the water go up one nostril and down the other alternating. After this is done take some of the pulverized mixture and snuff up the nose three or four times a day. This treatment should be kept up night and morning for two or three months, which will effect a permanent cure. The tube, starch, pulverized sugar, and burnt alum will not cost more than 75 cents to \$1 at any drug store. This recipe, if carefully followed, is worth many dollars in comfort to catarrh sufferers.

Cement Stable Floors.—The trouble of stock slipping on a cement floor can be avoided by marking into squares or diamond shape about four inches. A trowel is especially made for this purpose. I prefer a deeper groove than is cut by them, not less than half-inch. Any blacksmith could make it, say about two inches wide and six inches long. A ridge runs the length of it on the under side for cutting the groove; one-half inch ridge is about right. The trowel is bent upward from center to both ends, nearly an inch bend. On one end is the handle. You can smooth the cement and cut the groove at the same time around the larger sections.

Sprocket Chains.—Sprocket chains have superseded plain belts and pulleys, and are now used on all farm machinery, from the greatest to the smallest. But, after much use, links will wear too long, so as not to mesh down in between the sprockets, but climb out, thus throwing the chain off. The trouble can be adjusted by taking chain, link by link, standing them endwise on something solid and hammer hooked end down. A few links hooked in wrong side out will throw a chain. A chain of this kind must have uniformity to operate successfully.

A Home-Made Elevator.—An arrangement of some kind is often necessary in certain farm buildings for the purpose of lifting barrels, boxes, crates or bags of vegetables, fruit or grain from the basement to the first floor and from there to a second or third story, and even in the ordinary large and well-divided barn is often a great help. Many times a farmer is kept from rigging up such a device because he imagines it would be too complicated or expensive an affair, when the case may be that it would more than pay for the cost or labor of making it. In the illustration, Fig. 1, is shown the easiest constructed lifting device. It may be adapted to the building or position in which it has to be placed; the main idea is presented in the illustration, and will guide any of our naturally ingenious farmers in making use of the arrangement. The supporting pieces are made of dimension stuff of any material strong enough and most inexpensive, or the shaft and wheel may perhaps be so adjusted in the top frame-work of the building that an independent frame shown in the cut may be dispensed with, and the main principle still adhered to. If a spoked wheel to carry the power rope is used on the shaft, it must be boarded up on the sides to furnish a projecting rim on each side and keep rope on the wheel, as is illustrated, a portion of one side being left out to make this plain. Have the shaft to revolve in the frame by means of iron gudgeons in simple bearings which any blacksmith can make. A piece of board is nailed on each of the middle crosspieces next the wheel, and serves to keep the power rope in place. The rope is, of course, put on the wheel in the looped manner shown by "A" to prevent its slipping. Cotton rope, 1 to 1½-inch size, will be more pliable and easier on the hands than Manila rope. A brake will be found very useful in many instances, for holding the load to be elevated at a desired point or for letting it down slowly, and is easily made as the sectional cut, Fig. 2, will show. A band of light sheet iron "A," as wide as rim of wheel, has one end lapped round and tacked to one crosspiece. The band is then brought up over the wheel, and outside the other crosspiece is hinged to a short

lever, "B." A ¼-inch rope extends from this lever to be in reach of the operator. A spiral spring is attached to lever and frame under "C," and throws band from wheel when brake rope is released. Wheel and shaft, when elevator is descending, turn in direction indicated by arrow, and this causes the brake to have great effect. If a suitable wheel to put on the shaft is not found at hand, it will have to be made with the rest of the outfit. With one of the small hand saws made for such work, cut circles from inch boards and screw or nail together with grain of wood at right angles, making a wheel center 2 inches broad, of the required diameter. Cut some more circles, but this time have them 4 inches greater in diameter. Put these on the two sides of center wheel. The completed wheel will now be 4 inches broad, with projecting rims furnishing a 2-inch deep groove for the rope. When making the wheel it is possible to have it of any reasonable diameter, remembering that the greater the diameter of wheel, so long as diameter of shaft is left the same, the greater the lifting force; and the elevator will constantly work slower as this force is increased.

Knowing the diameter of wheel and shaft, and allowing, say ¼, for friction, it is an easy matter to calculate the weight which can be lifted on the elevator by a given exertion on the power rope, as by a simple rule of proportion the radius, diameter, of the power wheel is to the diameter of the shaft the same as the power is to the weight. For example, if the wheel is 6 feet (72 inches) in diameter and the shaft 8 inches, and the operator exerts a power of 100 pounds on the wheel rope, he will be able to lift 675 pounds with the shaft rope, for 72 inches minus ¼ for friction, leave 54 inches, and this remainder multiplied by the power, 100 pounds and divided by the diameter of the shaft, 8 inches, gives 675, the force in pounds the elevator will exert on the weight (8:54::100:675; or if it be desired to find the power when weight is known, 54:8::675:100).

In theory, if a 6-foot wheel and 8-inch shaft give this result a 3-foot wheel and 4-inch shaft should do the same, but practically will not quite do so, as the friction is greater as the shaft is made smaller. A 6-inch shaft, however, ought not to work at more than ¼ loss for friction, if the rope used on the shaft is pliable, and with a 4-foot wheel the operator will be enabled to lift 1,200 pounds by exerting a power on the hand rope of only 100 pounds. This shows how useful the elevator is to one man for elevating to any height by a comparatively slight exertion a weight which no four ordinary men without mechanical assistance could conveniently move from one point to another, even on the ground floor.

A platform or "cage," as shown in Fig. 4, is really an essential part of the elevator, and is not hard to make. Fasten the lifting rope to 2 stout wooden pieces arranged in shape of an "X," and these in turn to the platform frame by means of light iron rods of required length, using bolts and washers on the rods. Make the whole cage of light but strong material, and have it large enough for the object in view. The article to be lifted, whether it be a sack of fertilizer or a tongueless mower, or other piece of machinery, is readily placed on the board platform and easily and safely elevated to the desired point. The elevator cage may work inside a boarded-up case, like a dumb-waiter, if so wanted. When it is to work outside of a casement, upright pieces of scantling can be fitted in building from floor to floor, to guide and steady the platform. The lifting rope may be unloosened from the cage at any time, and fastened directly to the object to be lifted, if found necessary, or more convenient to do so.—J. G. Allshouse, in Ohio Farmer.

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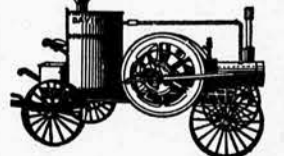


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