LIVE STOCK BREEDERS' SPECIAL EDITION—32 PAGES.

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SIXTEEN TO TWENTY PAGES—$1.00 A YEAR.

BREEDERS' DIRECTORY.

SWINE.

DUROCS Prize-winning strains. . . . N. B. SAWYER, Cherryvale, Kans.

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

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

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Twenty young boars old enough for service. Wilkes and Klever Model strains. Also sows and gilts bred or unbred. All stock sold recorded free.
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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 cockerels for sale.
MANWARING BROS., Lawrence, Kans.

Sunnyside Herd
PEDIGREED POLAND-CHINA HOGS.
I now have for sale a fine lot of large, well matured early spring boars, two of them just past 1 year old; all fine, large, mellow fellows, broad backed, large boned and well marked. ....Write me for description and prices....
M. L. SOMERS. Altoona, Kansas.

PROSPECT PARK HERD
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 / Telegraph address } Pearl, Kans. | RHINEHART, KANSAS.

FIFTEEN BRED GILTS,
Daughters of Knox All Wilkes, Majestic Chief and Ideal Black Chief; they are bred to Imperial Chief, the first-prize boar at Iowa State Fair, 1900, Ideal Black Chief and Kanawaka Chief by Midway Chief. These gilts are as good as any we have raised this year. We have some fall boars sired by Ideal Black Chief and Majestic Chief, the best we have ever raised. Parties wanting something to put at head of their herd should correspond with us. Prices right.
DIETRICH & SPAULDING, Richmond, Kans.
Farm one mile from station.

POLAND-CHINA HOGS
Herd headed by I Know Perfection 48263 O., sired by Chief I Know 37167 O., and out of Black Beauty F. 114642 O., assisted by Kansas One Price 461150 O., Look At Me Jr., and Young U. S. I have a few fall gilts by Kansas One Price and one by Lawrence Perfection 3d; also a few extra good March and April boars for sale. Gilts will be sold bred or open. Write me, or come and buy for yourself. I will guarantee all stock as represented. W. E. NICHOLS, Sedgwick, Kans.

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.

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., Kas.

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, Kansas.

DUROC-JERSEYS
rize-winning strain. Young stock for sale.
WARE & POCOKE, Station B., St. Joseph, Mo.

PARKALE STOCK AND FRUIT FARMS
THOROUGHBRED HEREFORD CATTLE.
CHAS. A. SCHOLZ, Proprietor, FRANKFORT, KANS

DUROC-JERSEY SWINE--- REGISTERED.
Some extra J'l and August pigs at reasonable prices. Write us and get first choice.
NEWTON BROS., WHITING, KANS.

PLEASANT HILL HERD POLAND-CHINAS
Twenty selected pigs of September farrow for sale.
HERMAN ARNDT, Templin, Kans.
Shipping station, Alta Vista.

PERFECTION CHIEF BOARS, GUY DARKNESS BOARS.
CRESCENT HERD Has 'Em.
Come and see, or write your wants.
SAM W. HILL, Hutchinson, Kansas.

MAINS' HERD OF POLAND-CHINAS.
JAMES MAINS, Oskaloosa, Jefferson Co., Kans.
Headed by the grand boar, Anderson's Perfect I Know, dam Anderson's Model (43611), sire Perfect I Know 19172 mated to a lot of choice selected sows of the most noted prize-winning families. A fine lot of fall and spring pigs ready to ship. Write for what you want. Safe arrival and satisfaction guaranteed.

VERDIGRIS VALLEY HERD
Large-boned, Prize-winning POLAND-CHINAS.
We have for sale 6 last fall boars, 3 extra good. Also 100 spring pigs. They are of the low-down, heavy-boned, lengthy, easy-keeping kind. The practical, money-making kind of hogs. We can furnish pairs or herds not akin, and of any of the popular and prize-winning strains. Prices reasonable. Nothing but the best shipped on order.
WAIT & EAST, Altoona, Wilson Co., Kans.

R. S. COOK, - - Wichita, Kans.,
Breeder of POLAND-CHINA SWINE.
The Prize-Winning Herd of the Great West. Seven prizes at the World's Fair. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 28441, Black Joe 28603, 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.

33--PURE BRED POLAND-CHINAS--33
For present sale, I have CHOICE SOWS,
Bred to Logan Chief 2d 24427 and Proud Tecumseh 24655. Most of the sows are sired by the 900-pound Corwin I Know 18448 and Hadley U. S. 20186. Also 50 choice October pigs at $8 and $10 for the next 30 days. My hogs have good heads and small, fancy ears. Come and see them or write.
JNO. BOLLIN, Kickapoo, Leavenworth Co., Kans.
I ship from Leavenworth.

MAPLE GROVE HERD OF - - - **REGISTERED POLAND-CHINAS**
HIRAM SMITH, Breeder,
Colwich, Sedgwick County, Kansas.
Herd headed by the famous herd boar, BLACK CHIEF (42357), and assisted by IDEAL U. S. (Vol. XXII). I have on hand 30 serviceable boars and 35 gilts for sale at reasonable prices; quality, style, and breeding considered. Out of 20 richly-bred sows, such as Worldbeater's Beauty (109484), Dolly P. (105020), Black Bessie (104244), and Banner's Pride (103706). Inspection or correspondence invited.

PROTECTED PIGS PAY The verdict of thousands of stockmen who use Vesey's Star Anti-Cholera. It not only protects—it cures cholera hogs. It makes them grow and fatten; it causes early maturity. Sold under an absolute guaranty. You can deposit money in bank pending results. Call on or address
ANTI-CHOLERA CO.,
263 F Exchange Bldg., Kansas City Stock Yards

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. O. KINGSLEY, Dover, Shawnee County, Kans.

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

Polled Durhams! THIS little ad. will direct you to the largest as well as the best Scotch bred Polled Durham herd of cattle in the United States. ☞ 150 fine Duroc-Jersey pigs.
F. F. FAILOR, NEWTON, IOWA.

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

PERCHERON HORSES, AND ABERDEEN-ANGUS CATTLE
GARRETT HURST, Breeder, Zyba, Sumner Co. Kans. For sale 1 young stallion, and 1 mare; also 3 cows, and 1 bull. All registered.

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, KANSAS.

RED POLLED CATTLE.

Largest Herd in America.
S. A. CONVERSE,
Proprietor, Importer, and Breeder.
Cresco, Howard Co., Ia.

D. P. Norton's Shorthorns
Dunlap, Morris County, Kansas.
Breeder of Pure-bred **SHORTHORN CATTLE.**
Herd bull, Imported British Lion 133692.
Young .·. Stock .·. For .·. Sale.

Sycamore Springs Stock Farm
SHORTHORNS.
H. M. HILL, Proprietor, La Fontaine, Kans.
All stock reserved for the Gowdy, Wolf & Son, and Hill sale at Kansas City, November 20, 1900. Personal inspection of our sale draft and of 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 breed high-class Duroc-Jersey swine. Can ship on Santa Fe, Frisco, and Missouri Pacific R. R.
J. F. STODDER, Burden, Cowley Co., Kans.

RECORDED HEREFORD BULLS FOR SALE.
The get of Marmion 66646 and Anxiety Wilton A—45611, 10 to 24 months old. These bulls are large, and good individuals, and of the best of breeding. Inspection invited.
FRED COWMAN, Lost Springs, Kans.
Breeder (not dealer) of HEREFORD CATTLE.

SUNFLOWER HERD
Scotch, and Scotch-topped
SHORTHORN CATTLE
POLAND-CHINA SWINE.
Herd bull, Sir Knight 124403. Herd boars, Black U. S. 2d 22582 S., and Sunflower Black Chief 23603. Representative stock for sale. Address
ANDREW PRINGLE,
Harveyville, Wauhaunsee Co., Kans.

CATTLE.

BULLS AT ROCKY HILL.
On account of bad weather and inadequate room, our sale January 9th was called off after a few lots had been sold. We now offer a car load of toppy bulls at retail; will make very low price for the lot.
J. F. TRUE & SON, Newman, Kansas.
On U. P. R. R., 12 miles East of Topeka.

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. BURLEIGH, KNOX CITY, MO.

ALFALFA MEADOW STOCK RANCH.
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, Lincoln, Kans.

Maple Leaf Herd of THOROUGHBRED -- SHORTHORN -- CATTLE, AND POLAND-CHINA SWINE.
JAMES A. WATKINS, Whiting, Kans. Farm is two miles south of Rock Island depot.

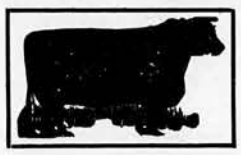
BREED THE HORNS OFF BY USING A RED POLLED BULL.
CHAS. FOSTER & SON, FOSTER Butler Co., Kans.
Breeders of Red Polled cattle. Herd headed by Powerful 4582. Pure-bred and grades for sale. Also, prize-winning Light Brahmas.

MT. PLEASANT HERD OF SHORTHORNS
Herd headed by Acomb Duke 18th 142177. Herd composed of Young Marys and Galateas. Young Bulls for sale. Sired by Phyllis Duke 131838.
A. M. ASHCROFT,
R. D. No. 3. Atchison, Kan.

BILL BROOK HERD
REGISTERED **SHORTHORN CATTLE.**
Headed by Iowa Scotchman 2d. Young bulls and heifers always for sale. Write for prices, and address
H. O. TUDOR, Holton, Kans.

Registered Herefords.
THOS. EVANS, Breeder,
Hartford, Lyon County, - - - Kansas.
SPECIAL OFFERINGS:
FOR SALE—Six bulls and fifteen heifer calves, one 3-year-old imported bull, one yearling bull, and 5 cows.

PURE BATES SHORTHORNS.



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

WANTED.
Furs Wool Hides Feathers.
Highest Prices Paid. Write us before selling or shipping elsewhere.
LARMAR & CO., 916 North 3d St., SAINT LOUIS MO

CATTLE.

PIONEER STOCK FARM.

J. H. McALLISTER, Proprietor.

—BREEDER OF—

PURE BRED GALLOWAY CATTLE, POLAND-CHINA AND CHESTER WHITE HOGS, JACKS AND JENNETS.

STANDARD BRED STALLIONS AND MARES.

AGEE, HOLT COUNTY, NEBRASKA.

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. PATTERSON, Manager

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H. M. Satzler,

Burlingame, Kansas,

.....BREEDER OF.....

HEREFORD CATTLE,
BERKSHIRE SWINE,
COTSWOLD SHEEP.

STOCK FOR SALE.

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 BROS.,
Elmdale, Chase County, Kansas.

H. R. LITTLE,

HOPE, DICKINSON CO., KANS.,

Breeds Only the Best

Pure-bred

SHORTHORN CATTLE.

The herd numbers 135, headed by ROYAL CROWN 125698, a pure Cruickshank, assisted by Sharon Lavender 143002. ∴ For Sale just now **16 Bulls** of serviceable age, and **12 Bull Calves.** Farm 1½ miles from town. Can ship on Mo. Pacific, R. I., or Santa Fe. Foundation stock selected from 3 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 127364, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Twenty bulls for sale.

C. F. WOLTE & SON, Proprietors.

LOCKRIDGE STOCK FARM

GEO. CHANNON, Proprietor

Hope, Dickinson County, Kansas

BREEDER OF PURE-BRED

SHORTHORN CATTLE,

POLAND-CHINA SWINE,

PLYMOUTH ROCK POULTRY.

FOR SALE: The young Shorthorn herd bull, Rosamond Victor 12th, a half brother to Bothwell's heifer, Strawberry, that sold at the Kansas City Sale for $700. Will also sell a few young bulls and heifers. Now offer in Poland Chinas 40 spring gilts, bred or open, and 100 fall pigs. ∴ Also 200 Plymouth Rock cockerels. Prices very reasonable as feed is too scarce to carry so many over winter. : : :

COMBINATION SALE

....OF....

HORSES, JACKS, and MARES,

ON FEBRUARY 25, 1901.

COL. J. W. SPARKS, Auctioneer.

25 head of Percheron Stallions and Mares, 25 head of Clydesdale, English Shire, French Coach, Standard-bred, and Thoroughbred Stallions and Mares will be sold. ∴ ☞ Send for Catalogue.

A. H. SHAFFER, Fulton, Kans.

CATTLE.

BELVOIR HEREFORDS.

....OWNED BY....

STEELE BROS., Belvoir, Kans.

Announcement:

We call especial attention to our select offering of 20 Bulls and 20 Females in the Combination Sale held at Kansas City, February 7 and 8, 1901. ∴ Send for Catalogue.

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 granddam, 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 DoubleMarys. Can offer Godoy Calves from these tribes.

W. P. HARNED, Vermont, Cooper Co., Mo.

COBURN HERD OF

RED POLLED CATTLE

GEO. GROENMILLER & SON,
Coburn, Franklin Co., Kans.

Breeders of full bloods, and high grades. For sale a number of extra good high grade bulls from 6 to 12 months old; also a few choice full bloods. Herd numbers 90 head.

POWELL'S HEREFORDS.

Sires in Service: JUDGE VICTOR 62246, ROYAL BOY 82820.

Special Offering: Three very choice bull calves, extra large, growthy fellows in good flesh. W. S. POWELL, Moline, Elk Co. Kans.

HORSES AND MULES.

PERCHERON HORSES.

J. W. & J. C. Robison, Towanda, Kansas.
Importers and Breeders. Stallions for sale.

Leavenworth County..

JACK FARM.

Twenty-five Jacks and Jennets for sale; also a registered trotting-bred stallion, 16¼ hands high, weight 1,300 pounds. . . . .

O. J. CORSON....
....Potter, Kansas

SNYDER BROTHERS, WINFIELD, KANSAS.

.....BREEDERS OF.....

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

BREEDING STOCK FOR SALE.

SHEEP.

..AMERICAN..

Angora Goat Breeders ASSOCIATION

For all information as to registering, etc., address

W. T. McINTIRE. Secretary,
227 Live Stock Exchange KANSAS CITY, MO

HOGS, SHEEP, POTATOES.

Two Registered Duroc-Jersey Gilts,

bred to registered Duroc-Jersey boar not akin, $15 each.

Two Registered Poland-China Gilts,

bred to registered Poland-China boar not akin, $15 each; Poland-China pigs, registered, $10 each.

Registered Poland-China and Duroc-Jersey boars, 250 pounds, $15 each.

Registered Shropshire Rams and Ewes in Lamb, $20 each.

A New Potato. "The Kansas Snowball."

Best keeper and table potato ever grown in Kansas. One pound by mail, 50 cents; peck by express, $2: bushel, $5. "Early Kansas" all sold.

J. CLARENCE NORTON,
: : : : MORAN, KANS.

"I had grip three months; could not sleep; pain all over and headache very bad. Dr. Miles' Nervine, Pain Pills and Liver Pills made me well."—Mrs. E. C. Bowlby, Waterloo, Ind.

Columbus Herefords

Herd headed by COLUMBUS 51875, Hesiod 17th 56467, and Weston Stamp 15th 108353. Columbus is the sire of the $7,500 Dale, the $5,050 Columbus 17th, the $2,000 Columbus 12th, the $1,250 Viola. Five of Columbus' get, of our breeding, sold for $7,140 or an average per head of $1,428. Young stock of both sexes for sale sired by Columbus, and Hesiod 17th. ∴ ∴ ∴ ∴

BENTON GABBERT & SON, Dearborn, Mo.

Maple Leaf: Chicago, Rock Island & Pacific Railroads.

SUNNY SLOPE HEREFORDS.

155 HEAD FOR SALE—Consisting of the imported herd bull, Sentinel, 7 2-year-old bulls, 73 bulls from 8 to 18 months old, 60 yearling heifers, and 10 cows. - - - - - - - -

MY ANNUAL SALE—Will be held at Kansas City in connection with W. S. Van Natta, and Scott & March February 26 to March 1, 1901, when 160 head will be sold from the three herds at auction. . . .

C. A. STANNARD, - - - Emporia, Kansas.

SCOTT & MARCH,

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

HEREFORDS,

BELTON, CASS COUNTY, MO.

BULLS in service, HESIOD 29th 66304; Imp. RODERICK 80155; MONITOR 58975, EXPANSION 93663, FRISCOE 93674, FULTON ADAMS 11th 93731. HESIOD 29TH 66304.

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

...GUDGELL & SIMPSON...

INDEPENDENCE, MO.,

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

HEREFORDS.

One of the oldest and largest herds in America.

ANXIETY 4th blood and type prevail.

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

T. K. TOMSON & SONS,

* * Proprietors of * *

ELDERLAWN HERD OF SHORTHORNS

DOVER, SHAWNEE COUNTY, KANSAS.

GALLANT KNIGHT 124463 in service. Females are pure Scotch and Scotch-topped on the best American families. 100 head in herd. A choice lot of young stock for sale. Correspondence and inspection invited.

PEARL SHORTHORNS.

HERD BULLS:

BARON URY 2d 124970. LAFITTE 119915.

A FEW CHOICE YOUNG BULLS FOR SALE RANGING FROM 5 TO 20 MONTHS.

C. W. TAYLOR, - - Pearl, 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 breed Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale. Address

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

GALLOWAYS.

Largest Herd of Registered Galloways in Kansas.

Young bulls, cows, and heifers for sale.

E. 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. R. PLATT, Kansas City, Missouri.

Office at Platt's Barn, 1613 Genesee Street.

KANSAS IMPROVED STOCK BREEDERS' ASSOCIATION.

Eleventh Annual Meeting Held at Security Hall, Topeka, Kansas, January 7-9, 1901. A Big Meeting. Large Attendance. The Fifth Annual Banquet a Great Event.--A Full Report.

The eleventh annual meeting of the Kansas Improved Stock Breeders' Association was declared by all who expressed themselves to be one of the best all-round sessions ever held by the association since its organization in 1890. The character of the papers and topics considered were both timely and of a practical nature.

There was a better feeling among breeders than ever before owing to the fact that sales of all classes of stock had been unusually good, and at very remunerative prices; and the unusual prosperity was conceded largely to the fact of the great work accomplished by this association for the promotion and advancement of improved stock generally.

The part taken by the Shawnee County members of the association in attending to all of the preliminary preparations for the annual meeting and banquet greatly facilitated matters, and was appreciated by the association.

The meeting was held at Security Hall, the property of the order of the Knights and Ladies of Security, and every session was well attended, a number of the sessions having over 300 interested people present.

The reports of officers showed a very gratifying condition of affairs, and the receipts of the secretary's office for the year 1900 was $206 for paid memberships, and some past due accounts. The expense for the year, including several thousand copies of the proceedings was $183.50, and before the close of the session the membership was increased nearly 50 per cent over 1900, and especial effort is to be made to increase the membership during 1901 to 500 breeders.

At the first regular session Mr. J. W. Robison, of Eldorado, delivered the following address:

President's Annual Address.

I am glad to meet again so many able men engaged so successfully in improving the live stock of Kansas, and the rest of the civilized world, for Kansas improved stock is now used to better the breeds of all the various species and kinds in every state in our Union, as well as the herds beyond the seas and oceans.

The quality of our home bred stock has long been admired in the nearby states and markets, until its good qualities are fast becoming recognized in the markets of the world for breeding and for food supplies. Our pure air, sunshine, and genial climate rivals any in the production of healthful meat products, and in the quality of its breeding herds.

The interest of this society promises well for the future, and its work will only be accomplished when every scrub is banished from our state, and their places filled with an improved animal, that will mature in about one-half the time, and command double the price in the market, and be a satisfaction to the producer, and to which he may point with pride as the result of his well-directed efforts.

This applies to all meat-producing animals, as well as the dairy breeds, wool producers and the horse for use and pleasure. In no time in our past history has the improved stock of our state been brought up so close, as at the present time the purchaser is often compelled to buy young and immature stock, or seek over wide areas to find that suitable to his needs, and in some instances to even go beyond our state borders to supply his wants, and sometimes even beyond our nation's border to obtain the quantity needed in some classes to fill the urgent demand caused by prosperity. It fills our hearts with satisfaction and gladness to see that this increased demand and price will enable every breeder of improved stock of all kinds to not only meet his liabilities, but to extend the good work he is engaged in to the advantage of his neighbors and state.

The live stock industry of Kansas is in a prosperous condition. This is confirmed by the lat report of our confirmed by the late report of our worthy secretary of the state board of agriculture for the year 1900, as compiled from assessors' report, which is as follows:

Horses and mules, 875,952, value $44,688,246; milch cows, 712,582, value $23,575,208; other cattle, 2,443,343, value, $60,933,000; sheep, 200,301, value $600,000; swine, 2,286,734, value $13,720,404. Total value of live stock for 1900, $143,457,753.

Increase in one year of $28,348,780; increase in two years of $66,000,000, which indicates a prosperous condition of Kansas live stock interests.

The Kansas corn crop was short of the usual crop of that cereal, but the wheat crop was unusually large. Oats were an average crop, and alfalfa one of if not the best crops ever grown in the state. Sorghum and Kaffir-corn crops go far to make good the shortage in corn. The fine fall weather has enabled cattle and all kinds of stock to graze on stalk, and wheat fields and late growth of alfalfa has enabled stock to graze up to the present time most of their living, leaving the winter's feed mostly unused to the present.

The increased demand for and selling price of horses and mules has stimulated production of this class of stock to an unusual degree. The demand for horses and mules in Europe, especially England and Germany, as well as for military use in Africa, has taken about all of our surplus stock fit for their use to such a degree that we are threatened with a shortage of stock suitable for our home use.

Our agricultural college is in need of animals of the best type of the various breeds, so that the sons and daughters of our progressive farmers may become familiar with their desirable qualities, and become proficient in distinguishing between the desirable and the less desirable ones, and the good points in the various breeds now existing. And the farmers of Kansas surely need and ought to have a state fair inside of our own borders to exhibit the results of their efforts in producing the best of their stock, grains and manufactures, and where they can see and compare the success of their neighbors inside and outside of our state, and where they can meet and compare methods and modes of production. Of all that pertains to the farm, this state being preëminently an agricultural and stock producing state, that which advances the farm interests advances the interest of all.

It is to be hoped that the legislature about to convene will lend a helping hand to aid in forwarding and securing an exposition in 1904 in Topeka, and that they will join with the nation and others of our states in making it an exposition worthy of the section it is intended to represent.

Your society in connection with dairy, poultry and other kindred societies should receive aid in publishing their proceedings, and placing them in the hands of Kansas farmers so that all advance in these lines may become well known in every household in our border. Our society, in connection with enterprising breeders and a wide-awake Kansas newspaper, the KANSAS FARMER, managed by your worthy secretary, placed 20,000 copies of your last year's proceedings in the hands of farmers at a cost of less than the paper printed on. Such enterprise will be appreciated by the breeders and farmers.

Hints to Young Breeders.

JOHN WARNER, MANHATTAN, KANS.

Every farmer is or should be to some extent, a stock-breeder. Whether he is going to breed stock of good or of poor quality is largely a matter of his own choice. Any man who has the ability to be a good farmer is also able to be a good breeder. The intelligence and energy necessary for producing crops of superior quality will, if properly trained, enable one to raise stock of superior quality.

The young man who thinks of being a breeder must have a love for good stock, and find pleasure in properly caring for his animals. He must be willing, many times, to sacrifice other pleasures in order to attend strictly to business. He must have good business ability with unquestionable honesty. He will probably have to build up his trade and a few dishonest deals may injure his business seriously.

When a young man undertakes to become a stock-breeder he should resolve that he is going into the business not for a season, nor a few years, but as a life vocation. It takes time to build up a good, uniform herd or flock, as well as to establish a profitable and reliable trade. For the first time he may expect with some reverses and not be able to secure the large profits for which he had hoped, and which other and older breeders may secure, or which may be obtained in other vocations. But he should not be discouraged. He should consider that all businesses must have their beginning, and probably all were unprofitable, or at least less profitable in their early days. We must all be children before we can be adults. And so with stock-raising or any other business.

Before starting into breeding fine stock, some knowledge of the business is valuable. If the young man has had little or no previous training, it may be well for him to spend some time on the farm of some profitable breeder, and there learn as much as he can of the business and of the stock. One of the first questions to be settled is the

KIND OF STOCK

he is going to breed. This is largely a matter of choice. But he should give some study to the kind of a farm he has, as regards soil, location and natural adaptation. On most farms in eastern or central Kansas, stock-breeding can be carried on in connection and without interferring with general farmig. In fact one is a necessary helpmate to the other. Also several kinds of stock may be kept at the same time. The same general principles necessary for breeding one kind of stock successfully apply to all. Horses, cattle, and hogs, for example, are usually necessary on every farm. These can usually be raised on the farm cheaper than they can be bought. It remains for the farmer to say whether he is going to keep good or poor stock.

Having decided to keep blooded, or good stock, the next question is,

THE CHOICE OF BREEDS.

This depends largely on the taste of the breeder. In most localities he will find that where one breed succeeds others will succeed. One may make a success of draft horses, and his closest neighbor be equally successful with roadsters. The Jersey and the Hereford may graze in adjoining pastures, each yielding their owners a good profit.

The market demand has its bearing on the breed kept. The beginner should select only such breeds as he may reasonably expect will be in steady and permanent demand.

It now remains for our young breeder to make the start.

Many young men—and older ones, too—have an idea that they must have a large capital before they can handle good stock. This is serious mistake. The rich man may keep unprofitable stock for the pleasure he gets from the business, but the poor man can afford to keep only such stock as will yield him a reasonable profit. The beginner, with small means, should aim to buy only a few animals at first, but select only animals of excellent individual merit. A male and one or two females make a very good foundation. Of course these should be registered stock and of the same breed, but not necessarily of the so-called "fancy breding" which command fabulous prices. He should base his selection on individuality, and leave the gilded pedigree to the men who have more money.

By startng with a small herd, the young breeder will have a chance to grow with his herd. As his business becomes more extensive and complicated, and his stock require more attention, he will be better able to meet these conditions. Many of our most successful breeders started in this way.

The foundation stock so selected will, of course, cost more than native stock. But the cost of keeping good animals is no more than that of keeping poor ones. The male produce may be disposed of at so far better prices than can be realized for native or even graded stock. In this way the original extra cost will soon be returned, while the females should be kept for a time to increase the size and profits of the herd.

The young breeder should not fail to provide comfortable shelter for his stock. He should consider that the animal that is not worth keeping comfortable is not worth keeping on his

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farm. This shelter need not be expensive, but very comfortable quarters may be provided at little cost. Then as he realizes profits from his stock, he can build more expensive and permanent sheds or barns.

Abundance of good, nutritious, palatable food should be supplied to stock at all times. Wasteful feeding should always be avoided. It is possible to feed liberally, and yet waste little or no feed. The breeder should become familiar with the various feeds and what they will accomplish. Then give his stock such feeds as they require, whether he wishes to produce growth, fat, milk or wool.

Having once gotten started in breeding, the young man should

HOLD TO CHOSEN LINES.

Some men get a nice start of a certain breed, and then change to another breed. Often, in this change, an entirely different type is used and the two breeds do not "niche." The result is a tearing down of all that has been accomplished. Not only should the young breeder stick to his chosen breed, but he should also have a fixed type in mind, and in introducing new blood select animals as near as possible to his type. Such selections will soon produce uniformity in his herd.

In conclusion, I would say to the young farmer with limited means, you can not afford to keep any other than good stock. The capital required to begin is but slightly more than that required for raising natives. The cost of keeping the best is not excessive and the profits are materially larger. If you are going to farm, you need stock. Three essentials should never be lost sight of, good breeding, good feeding and good care. Which of these is the most important I am unable to say.

DISCUSSION.

Mr. Glick: I certainly do not object to anything the gentleman has said in his paper, but I do not remember that he said anything cencerning the pedigrees of stock. I think every young breeder ought to know something of the pedigrees of the sock he is going to buy. He ought to know the breed of animals he is buying into. No man ever succeeded in mixing up his breeds. He has to have the pedigrees running in particular lines and in particular families. We are told it takes seven crosses to secure any kind of uniformity in breeds. If that is the case it is important that the young breeder. and any breeder for that matter, should breed in particular lines. I do not mean by this that all families should be closely related to each other, but they should belong to a certain class, bred in certain lines and educated in those lines. Mr. Bates succeeded in producing a family and class of cattle never surpassed. The Booth cattle never crossed successfully upon any other cattle. I do not know why

There is another thing in the crossing of animals. Booth bulls were first class animals—as good as any one else's, but were never crossed upon the Bates cattle, and they were never crossed successfully upon any other breed of cattle. In '73 a man in this country got up an imitation of the Booth cattle, and lots of them were imported into Kansas. But one bull was successfully crossed on their Shorthorns who could give character to his progeny. But where the cows were bred to both bulls it usually resulted in a good cross and a successful cross.

Now, the cow Mazurka, for which Mr. Alexander paid $3,000 in 1871, was a pure white cow. She left a long line of progeny in this country, which are entirely depended upon to-day, their stock being promulgated by Bates bulls being crossed on Bates cows.

But we have another class of cattle called the Cruickshanks. A man will make a mistake if he attempts to cross them with Booth cattle, as the mistake was made twenty-five years ago. Mr. Cruickshank started off to breed cattle, and made a mistake, the same as young breeders to-day. He was a successful breeder after he had bred Shorthorns for thirty years. He bought the best cattle possible but crossed them indiscriminately, and the result was that he never had a herd of cattle that satisfied him until he had been breeding for thirty years. He then adopted the policy which Mr. Bates and Mr. Booth pursued— and the result was he soon established a class of animals that satisfied himself, and that have given his name great renown as a breeder of fine Shorthorns in this country and in Europe also. But young breeders ought to understand that they can not cross Cruickshanks and Bates cattle. If persisted in you will produce a miscellaneous herd, some will be good, some indifferent. It is important that this particular line of pedigrees should be studied.

All the old breders breed up their herds by inbreeding to a certain extent. The foundation of the Bates cattle and of Shorthorn families in general was established by inbreding. The point I desire to carry in connection with the paper read is this: young men in establinhing herds must not start out with the idea that they can buy two or three Cruickshank cows and establish a good herd. Breed straight. You will get your reward in the sale ring. You will see it every day at the sale of thoroughbred cattle. Cross-bred animals are good andimals—sometimes better than the original pairs. But when you breed beyond the second pair you will find it to be a continual failure. Any young man who has the idea that he can cross these different breeds is simply raising animals to be sold to the butcher instead of the breeder.

Mr. Hubbard: You can not afford to start with scrub cattle. Start with something good. Messre. Glick, Robison and others have made for the state millions of dollars. It pays to start right. It costs you but little more. One good old cow will be the foundation of a family of good cattle. If you can not read a pedigree some good brother will come along and tell you what you don't know and you will always get some good advice. Listen to them—profit by their mistakes; they may set you right.

Mr. Berry: On this line of breeding depends the success of every breeder. One of the greatest mistakes a breeder can make is to introduce stock of a different type than his own into his breed. One of the best breeders in our land, Mr. Gentry, at one time told us through his paper that every sire and grandsire on his farm was taken from his last year's breeds. You can breed along this line and when you come to the granddaughters you can use the old hog again. Whenever you introduce something into your family of a different type you ruin all the good qualities in both of them. Many old breeders do not know this. I believe in the persistence of line breeding. We have never known a breeder to be successful who did not practice line breeding and in no other way do I know how to develop a type and breed and establish uniform herd; and I do not know who makes a greater mistake, the breeder who ignores family type or line breeding, or the one who does regard this but after establishing a good herd introduces new blood and tears down what he has built up.

President Thrall's Address.

Mr. E. M. Thrall, of Eureka, the president of the American Galloway Breeders' Association, was introduced, and in part said:

My remarks as a representative of the Galloway association will simply be to speak of the progress of our association, along with yours. With all breeders' associations, no matter what kind of stock they were engaged in breeding, the year 1900 was a phenomenally successful one. I rejoice with you in the fact that your association has done a good business. Ours has been equally fortunate. In studying the stock problem, I doubt if there was ever a better opportunity offered than the International Live Stock Exposition at Chicago. As that great swarm of people went to that show day after day the interest, of people of all classes and both sexes, in that exhibition of live stock was to every breeder of live stock a great pleasure.

E. W. THRALL, EUREKA, KANS.,
President American Galloway Breeders' Association.

All people are especially interested in horses, and as I watched the great interest manifested in the exhibition of fine horses I realized what a great industry it is. And as great as were the efforts made by Chicago, that great city, for what they knew a year ago would be a great exposition of live stock, even they fell down in making adequate preparation for that great throng of people. Chicago has learned her lesson, and Kansas City may profit by it, if this coming year she is to have a show anything of the character of that of Chicago in 1900. Many things in Chicago at the show surprised some of the people of this western country, one of which was the ignorance displayed by the children of Chicago in regard to domestic animals. The Chicago school children turned out en masse on Saturday to see the show. The amusing ignorance displayed by the children grown in the great city as to our domestic animals was a revelation to most of us. Among the school children there, there was one lot numbering 79, and the expressions they made occasioned the teacher's taking them in hand and examing them, with the result that only eight had ever seen a cow, and only four had ever seen a sheep, and two a hog.

I sometimes wonder if the breeders of live stock in Kansas realize the great advantage of geographical position which they occupy. As you watch the distribution of these great herds of fine stock in Chicago, Kansas City and Omaha, and watch their destination, you will see what a very large portion of them are absorbed by Kansas. On the other hand if you will watch the Kansas breeders in their work, you will see that they are reaching out in every direction. I was reading a stock paper published in Mexico, and in the advertising columns of that paper I noticed the names of several Kansas breeders. Consider the destination of the Kansas live stock—the amount that she sends to adjacent tates and territories; consider what the Kansas City market already is, and then you may begin to realize what a favorable territory we are possessed of. We all hear lots of talk about the advantage Kansas has in comparison with northern and eastern states for the growing of alfalfa. I have heard some great tales about the alfalfa business. There was one claim for alfalfa that it surprised me to see advanced. A physician down near Wichita has formed an elixer of life from an extract of alfalfa. This, if properly used, will put four pounds of flesh a day on a man. Of course our president needs nothing of this kind but the time may come when our worthy president may be succeeded by a man like Ingalls, and the association should keep a bottle of that elixer right on tap for that man.

President: That comes from Wichita. I guess we will have to look to Mr. Cook for that.

Mr. Thrall: This afternoon, in the address of the president, he called your attention to the phenomenal increase in live stock values for the year 1900, and if I am not mistaken it was an increase of 28 million dollars. That is a tremenduous sum to think of, and when we remember that that is simply the increase in the live stock interests in the state of Kansas, we can readily see why these interests have been considered the corner-stone of prosperity.

There was a question under discussion here this afternoon, that it does not seem to me received enough consideration at the hands of this association. The afternoon was of course a preiminary meeting. I think all the gentlemen represented here at this stock meeting ought to have a full and lively interest in the question discussed here this afternoon, which was the transportation rates on pure bred stock. If we could secure more favorable shipping rates than we now have it will be of untold benefit to this issociation. Nothing will more quickly augment the sales of pure bred stock of all descriptions than will a lower shipping rate. When I go to the railroad companies and ask for rates on pure bred stock the reply is made in the shape of an ultimatum. If I tell them anything like what my stock is worth, on their asking me as to the price, their rate is so high that the buyer, who has to pay the same, can never reach it.

Now I want to say something more to this association to-night, and the only excuse I have for saying it is that I am going away to-morrow morning, and I think the association ought to hear it. It is in regard to the igno-

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rance of some people in regard to live stock. I find that this ignorance is not confined to the younger generation. Upon reaching Eureka, where I live, from the show at Chicago, I was introduced to a Chicago minister. He was very learned, and had a high classical education. He was asking me a few questions about the great show, and in speaking of it I remarked about the steer that sold for $1.50 per pound. "$1.50 pound for one steer?" "Yes, sir." "Well, that was a great price; but I suppose he was bought for breeding purposes."

Education for Farmers' Sons.

GEO. W. GLICK.

Kansas is preëminently an agricultural state. Its prosperity depends on the agricultural development that may be made, practiced, or learned from year to year. It should be the desire and work of every enterprising farmer and stock raiser to add something new to the grand fund of new information each year—to better conditions; to reduce cost of production, and improve articles produced in a more attractive form for market. This has been done in some instances to the great benefit of the producer, while in other cases progress has been made advantageously to those whose enterprise keeps abreast of the progressive spirit of the times.

But what we know now of improved methods the present class of farmers have learned by observation, practice, and the application of what they have learned to the every day work on the farm. The Kansas farmer is no dullard when it comes to taking advantage of new developments that are for his interest to experiment with, or adopt, and he is no laggard in the race for success when it comes to applying new principles or practices to his work if the financial prospect is any ways alluring or seems to promise adequate returns for the time or labor expended. Many new methods of farming, stock-raising, stock-feeding and horticulture have been taught by the state agricultural college and its exepriment station. The Kansas farmer has been swift to adopt and practice the new methods promulagted and when possible apply them in his vocation and to his financial benefit. Some are taking advantage of the great benefits that the agricultural college and its experiment station are extending to their sons. But while the college is doing its work successfully in its various lines, its benefits are not extended to the vast majority of the farmer's sons who are to take the places of the present generation when this generation passes away. The college is doing perhaps all it can in its present condition and with its limited means. One thousand to fifteen hundred pupils annually take advantage of its educational facilities. But when we consider that many of these pupils may remain two or three years at that school, that fact suggests that but a small fraction of our young farmer boys are availing themselves of the educational advantages it is able to bestow for the asking. This view of the number of students at that college will make the fact patent that probably not over two-thirds of the students who attend ever obtain the benefits of complete education as is proposed by the cirriculum. These facts show that scores of our young farmer boys do not enjoy the advantages of a progressive agricultural education and never can. This forces on them the slow plodding methods the present day adgrculturalists have had to pursue—to learn by experience, observation, and practice, and bear the losses and suffer the misfortunes that ignorance and inexperience entail.

But can these conditions be changed or modified so as in a measure to supply many of the deficiencies in the education of farmer boys? Can they become possessed of knowledge which is taught in the college and is of incalculable value in their sphere of life and in the special business that they may follow for a livelihood on the farm?

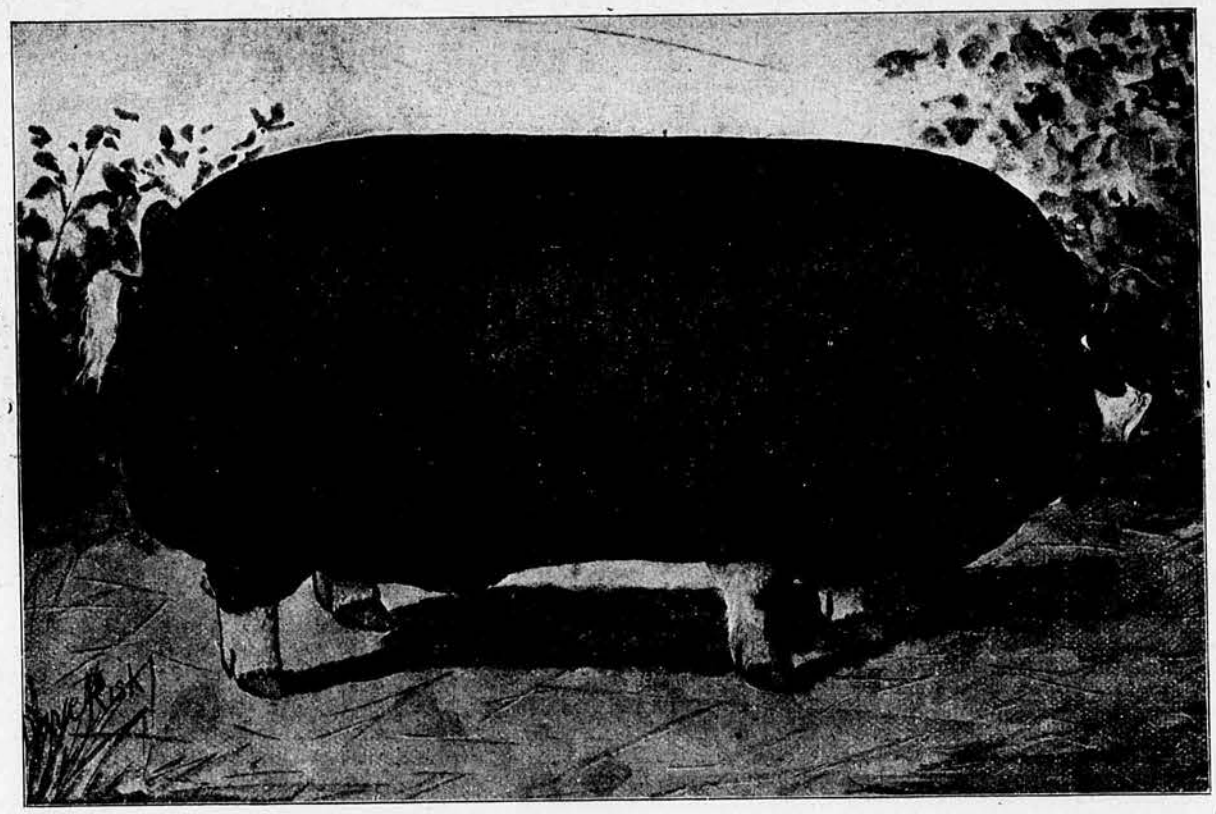
I have given some thought to this matter of supplying farmer's sons with a class of information that is really essential for them to understand to obtain satisfactory results in farm work and stock-raising. Zoölogy, botany, ornithology and entomology can and should be a part of the education of every farmer's son. I do not intend to convey the idea that these sciences should be taught in the technical sense of the term, or that the study of them should be made in a technical sense, or that teachnical terms of those sciences should be used only when needed to explain or amplify a subject more intelligently. I am fully satisfied that all the essential parts of those sciences can be taught in our common schools and should be part of the common school education of every farmer's son. I would not change or modify the present school system, except by adding one book to the list of readers now used. I would superceede the "third reader," so called, used in the public schools in the country districts, by one written in a popular and entertaining style with chapters or lessons on these subjects. Presented in this popular style, conveying to the young man's mind information on subjects in which he will soon take a lively interest, these subjects can all be so easily illustrated by the bright intelligent teacher, and their usefulness so easily demonstrated and understood by the student, they will store his mind with a class of information that will be useful in after life. The farmer's son feeds, cares for, and works the horse. Why should he not know all about horses? He may want to buy or sell, and he will want to know whether he is making a good or bad bargain, or whether the horse he is buying is sound. He will also want to know his age and his value.

ZOOLOGY.

This book should contain a series of chapters on the horse, with cuts of the draft horse, the roadster, and the thoroughbred, with a brief history of each breed, and the special purrposes for which intended to be used, and the best manner to feed and care for the animal to obtain the best results. These chapters would, of course, be followed by others on the zoötomy and zoödynamics of the animal, (or in American), the bony and fleshy organization. There should be a cut or picture of a skeleton or the bony structure of a horse with the name of each particular bone, and one of the fleshy formation, with the names of the different parts. These names would soon be learned by the pupil, and then he could always speak intelligently of an injury or hurt, and give its exact location. This should be followed by a chapter on and explanitary of external diseases or injuries to the horse which would enable the young farmer to detect ringbone, spavin, splint, windgalls, swenny, or other defects. How can the young farmer boy know all these things if he has to rely on what little information he can pick up as he struggles through life? He will be the victim of the sharpe horse trader and often the purchaser of unsound animals. Protect him by starting him off right in the common school.

The same general course should be pursued with cattle. A short history of the bovine race should be given with cuts illustrating the beef and dairy breeds with their general characteristics and general uses, with a picture or cut giving the name of each part of the animal, with a second cut showing the manner in which the well fatted steer is cut up, and the comparative value of the different parts. Such a cut or picture appears on page 12 of the report of the state board of agriculture in December, 1897. A comparison picture in same report on page 8 would add value to the lesson. This lesson of the beef steer followed by a chapter on feeding, the kind of animal to select, the best kinds of feed, with explanation of the meaning of the bal-

(Continued on page 104.)



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The Home Circle.

QUEEN VICTORIA.

The queen who reigned as a mother over a kingdom and an empire has just closed her earthly career. Her many friends will read with interest a review of a few of the incidents of her life as a child, as a woman, and as a sovereign.

Alexandria Victoria was born in Kensington Palace, London, May 24, 1819. It was but a chance, however, that she was born in a palace. Kensington did not belong to the Duke and Duchess of Kent, the parents of the young queen. As is often the case with remote relatives to their throne, the Duke and Duchess were poor and were living upon the continet when the time drew near for the birth of the little Victoria. Relatives in England who knew the claim the child would have upon the British throne felt that it would be a cause for future mortification if the birth occurred under the ordinary conditions of life to which the Duke and Duchess of Kent were then subject and hence arranged for them to visit Kensington Palace. There they were when the interesting event took place and where the little girl babe first saw the light and breathed the air of the British realm. That this was no ordinary child both parents of the young Victoria felt strongly. Yet the situation was a grave one. It was this. The child born to the Duke and Duchess of Kent had a distint claim to the throne of England—she might possibly some day be queen. With this future possibility in view it was felt to be imperative that the child should receive the most careful training and the best education that could be given her. No experience that would spoil her for the exalted position of ruling the land must ever come to her. On the other hand, the fact was not to be overlooked that she might pass her lifetime as a private citizen merely—hence she must not be taught to feel that she was altogether above the lot of other young women of her rank. Under such conditions was issued into the great complex world the woman who has reigned longer than any other monarch, not only in modern but also in ancient history. Her life is the story of a little girl born without the hope of the throne, so remote was her connection to it. Yet that very slight prospect ever effected materially the course of her life. From the hour in which her future possible greatness first dawned in her parents' mind every moment was spent in preparation for the high honor that afterward came to her.

CHILDHOOD DAYS.

When Queen Victoria was a little girl it is said that dolls were her special delight and chiefly those from Holland. With her little fingers she made their dresses and combed their flaxen hair. Early in her girlhood she made a study of the costumes of all nations and an assemblage of her handiwork would have resemoled an international congress. On this point it can be spoken with certainty, because the entire collection of little Victoria's silent companions, together with her doll house and its toy furniture, was recently discovered at Kensington Palace. The queen, when informed of the fact, expressed almost childish glee thereat, and ordered these relics of her girlhood to be sent to Osborne, her Scottish home. Upon the arrival of the puppets they were photographed, seated on chairs and sofas, and an elaborate illustrated description of them has since been published.

The doll-dressing period began with little Victoria in the year 1829, when she was 10 years of age. With her own knowledge, assisted by her foreign governess, she made the costumes for more than fifty little puppets. Several of them wore the wide, spreading hats of 1830 and some of them the cavernous cottage bonnets of 1840. Many of the dolls were of wood and, compared with the pretty creations of France and Germany of to-day, were frights. Most of them were devoid of real hair—horse hair or flax being used. More than half of the international costumes of the girl princess have passed away never to return.

Sir Henry Ponsonby is said to be authority for the statement that her majesty was devoted to dolls and played with them until she was 14 years of age. Little Victoria's make-believe family consisted of more than 150 dolls, of which 132 are still preserved in the Osborne house collection. Most of them Victoria dressed herself, although she was helped by Baroness Lehzen, as is faithfully recorded in the autobiography of her majesty. Sir Henry says in this connection:

"Her majesty was very much devoted to dolls, and, indeed, played with them till she was nearly 14 years old.

"Her favorites were small dolls—small wooden dolls, which she could occupy herself with dressing, and who had a house in which they could be placed.

"Miss Victoria Conroy (afterward Mrs. Hammer) came to see her once a week and occasionally others played with her, but with these excepctions she was left alone with the companionship of her dolls."

The little princess' day passed in the following manner: She rose early and breakfasted at 8 o'clock in the pretty morning room of Kensington Palace, sitting beside her mother in a little rosewood chair, a table to match in front of her, on which was placed her bread and milk and fruit, her nurse standing beside her. After breakfast, her half-sister, the Princess Feedore, retired with her governess, Fraulein Lehzen, to study, and the little Victoia mounted her donkey, a present from her uncle, the Duke of York. and rode around Kensington gardens. From 10 to 12 she received instructions from her mother, assisted by Fraulein Lehzen; then came a good romp through the long suite of rooms with her nurse, Mrs. Brock, whom she affectionately called her "dear, dear Boppy." At 2 o'clock she dined plainly at her mother's luncheon table; afterward lessons again until 4 o'clock; then she went with her mother for a drive, or if the weather was hot, spent the afternoon under the trees, coming out early in the evening for a turn in her little pony chaise.

The duchess dined at 7 o'clock, at which time the princess supped on bread and milk; she then retired for a play in a further part of the room along with her "dear Boppy," joining her mother again at dessert. At 9 o'clock she went to her little French bed with its pretty chintz hangings, placed beside that of her mother. An occasional visit to Windsor to see her "Uncle King," as she called his majesty, Georg IV., a sojourn at Claremont with her adored Uncle Leopold and a few weeks at the sea in autumn were the only breaks in her little life.

On her fourth birthday she had a great excitement, no less than being bidden by her "Uncle King" to attend a state dinner party with her mother at Carlton House. She was dressed in a simple white frock looped up on the left sleeve by a miniature of the king, set in diamonds, his majesty's birthday present to his little niece, whose vivacious manners seemed to have delighted him vastly.

Several stories are told of the quick repartee which "Uncle King" received from his amusing little niece of Kent. During one of her visits to Windsor the king said "Now, Victoria, the band is on the terrace waiting to play; what tune would you like to hear best?"

" 'God Save the King,' if you please, uncle," she promptly replied.

And again, when asked what part of her visit had been the greatest treat, she discreetly said, "Oh, the ride in the carriage with you, uncle." On this occasion the king had driven her himself, which was doubtless a great event.

HER FIRST COURT CEREMONIAL.

A few years later "Uncle King" gave a child's ball in honor of the visit of Donna Maria, the little queen of Portugal. This was the first court ceremonial at which the Princess Victoria was present. A lady of the court, however, gave great offense to the king by saying how "pretty it would be to see the two little queens dancing together." His majesty had no mind as yet to hear his little niece of Kent dubbed a queen.

In music and fine arts her majesty's taste and practical ability were no less remarkable than her knowledge of the higher belles-lettres. A brilliant pianist, she sang with a good mezzo-soprano voice so as to delight fastidious and exacting connoisseurs, and the merit of her sketches in water color and black and white justified the high praise given to them by the master, who used to maintain that, had it been her aim to excel in the fine arts, she might have become "the best female artist of the age." At the same time she was a mistress of the physical accomplishments in which the women of the English aristocracy are encouraged to excel. A fearless and elegant horsewoman, she rode in a style that was the admiration of gentlewomen who half a century ago prided themselves chiefly on their equestrian address, and she danced beautifully!

In a recent volume concerning the childhood of Victoria it is stated that the Duke of Kent insisted upon the baby being called Elizabeth, but in this he was overruled by the godfathers, the Emperor of Russia (Alexander I.) and the prince regent, and it was therefore suggested to call the infant Alexandria Georgiana. The prince regent, however, objected to his name standing second to any other, and the Duke of Kent insisted upon the first name being retained. Therefore, she escaped bearing the name of Georgiana. "Victoria" was added at the front; it was the name of the baby's mother.

Another story of the duke is that, playing with his baby when she was two months old, he held her high in his arms and said: "Look at her well, for she will be the queen of England." The author reminds us, however, that at this time there was no certainty that the children of the Duke and Duchess of Clarence would survive the perils of infancy; moreover, if the Duke of Kent had lived to have a son the boy would have become the heir in preference to his sister. If the Princess Victoria was unfortunate in living in an atmosphere too highly charged with contention, her childhood was, in another respect, fortunate, for, while she received an education carefully designed as a prepartion for a future exalted station, this, owing to the absence of absolute certainty with regard to her succession, was combined with almost all the simplicity and domesticity of private life. Thus, while she was protected from many of the disadvantages associated with the highest rank, its advantages were not lost.

HER EARLY TRAINING.

The Duchess of Kent gathered about her at Kensington Palace many of the foremost minds of the day in literature, science and social reform. She made the training of her child the one absorbing object of her life, and she seems to have realized that education does not merely consist in learning facts or acquiring accomplishments, but should also aim at forming the character and disciplining the whole nature, so that it may acquire conscientiousness and the strength which comes from self-government. This end being alwas kept in view and furthered, no doubt, by a responsiveness in the child's own nature, the little princess was trained in the habits of strict personal integrity. Like George Washington, she was veracious.

Victoria's coronation, in Westminster Abbey, was celebrated with wondrous pomp and circumstance. In the scene a young girl of eighteen took the oath of fealty with solemnity.

Carlyle, in a private letter to his brother (April, 1838), gave a vivid picture of the girl queen as he saw her then: "Going through the Green park yesterday I saw her little majesty taking her departure for Windsor. I had seen her another day at Hyde park corner coming in from the daily ride. She is decidedly a pretty looking little princess, health, clearness, graceful timidity looking out from her young face, 'frail cockle on the black, bottomless deluges.' One could not help some interest in her, situated as mortal seldom was."

VICTORIA'S ONE LOVE AFFAIR.

As those who have read her life will know, Queen Victoria had in the course of her life but one love affair. It is known that from babyhood she had been consecrated to her cousin, Prince Albert. Suitors for her hand were countless. Every prince imperial in Europe not already engaged entered the lists, but handsome Francis Charles Augustus Albert Emanuel, the second son of Earnest, Duke of Saxe-Coburg Saalfeld, won the prize. Albert and Victoria met for the first time when they were about 17 years of age. They were first cousins, Albert's father and Victoria's mother being brother and sister, the children of the Duke of Coburg. It is said that Albert was so shy that he hesitated to ask for his cousin's hand and that Victoria finally "popped the question." She was a queen at the time. The privy council was called together at Buckingham Palace on November 23, 1839, and were informed by Victoria herself that she intended to marry Prince Albert. In the "Greville Memoirs" we find this description of the memorable scene:

"All the privy councilors had seated themselves when the folding doors were thrown open and the queen came in attired in a plain morning gown, but wearing a bracelet containing Prince Albert's picture. She read the declaration in a clear, sonorous, sweet-toned voice, but her hands trembled so excessively that I wondered she was able to read the paper which she held."

The young queen did not believe in long engagements, and at noon on February 10, 1840, Victoria was wedded to Albert in the Chapel Royal, St. James' Palace.

While this marriage was a very happy one so far as the individuals were concerned, the English people never took kindly to Prince Albert. Yet he was a gentle, amiable man, shrewd enough to detect his unpopularity, and never to obtrude himself.

CHILDREN AND GRANDCHILDREN.

Queen Victoria, who may truly be said to have been not only a great queen and empress but a great mother of kings, queens and emperors, has livingto-day nearly fifty grandchildren. Of her children the Princess Victoria Adelaide Maria Louisa, the queen's first child, was born on November 12, 1840. The daughter married in 1858 Crown Prince Frederick of Prussia, shared

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with him the imperial crown of United Germany for many months in 1888 and is the mother of the present emperor, William II.

Albert Edward, the Prince of Wales, was born in November, 1841, who will become King Edward VII, of England, and Emperor of India. He married on March 10, 1863, the Princess Alexandria, eldest daughter of the king of Denmark. Seven other children were born to the queen, as follows: Alice Maud Mary, born April 25, 1843, married July 1, 1862, to Louis IV, Grand Duke of Hesse and who died December 14, 1878; Alfred Ernest Albert, Duke of Edinburgh and Duke of Saxe-Coburg-Gotha, born August 6, 1844, and married on January 23, 1874, to the Grand Duchess Marie, of Russia; Helena Augusta Victoria, born May 25, 1846, and married July 5, 1866, to Prince Frederick Christian, of Schleswig-Holstein; Louise Caroline Alberta, born March 18, 1848, and married March 21, 1871, to John, Marquis of Lorne; Arthur, Duke of Connaught, born May 1, 1850, and married March 18, 1879, to the Princess Louise Margaret, daughter of the late Prince Frederick Charles of Prussia; Leopold, Duke of Albany, born April 7, 1853, and married April 27, 1882, to the Princess Helen, daughter of the late Prince George of Waldeck, and who died March 28, 1884; and Beatrice Mary Victoria Fedora, who was born April 14, 1857, and married July 23, 1885, to Prince Henry Maurice of Battenberg.

VICTORIA'S HOME LIFE.

The queen learned from her German mother the excellent habit of early rising which stood her in good stead during a busy and laborious life.

Dressing a queen is by no means the lengthened and elaborate process it used to be, when to dress the hair alone took two hours; and in order to lessen the waste of time, the lady who was being dressed either held in her peignoir a small reception of her friends and acquaintances, or had a reader to minister to her mind while her head was being attended to. For the thirty-seven years of the queen's widowhood, the only changes in her dress was the slight modification of her widow's mourning in accordance with the alterations in the fashions of the day and the march of time.

The queen always breakfasted privately—that is, in her private rooms with such members of her family as were present with her. Even when she honored foreign royalties and her subjects with her visits, the practice has always been strictly maintained. Doubtless it has afforded a necessary relief from the formality and ceremony of other meals.

In summer, both in England and on the Continent, the queen liked to breakfast in a sheltered corner of the lawn or in a tent in the grounds. A lover of the open air, of open windows and open carriages well nigh to excess, seeing that rheumatism had attacked her, her majesty sought every opportunity of enjoying sea and mountain breezes on all occasions.

One of the strongest features in Queen Victoria's charatcer was the spirit of loyalty. Like all senisble people, the queen elected that, unless when exceptions must be made, the business of the day should be undertaken in the morning hours. The mere mechanical act of appending her signature to the scores, hundreds, nay, thousands of papers which it franks—so to speak, was in itself a toilsome task. But the writing of her name was the least of her work. From the commencement of her reign, and notably after her marriage with the prince consort, it is a well accredited fact that her majesty would sign no paper which was not a mere certificate of an appointment or a commission unless she made herself acquainted with the contents by having them read and discussed in her hearing. This conscientious obligation was not a simple form. The queen took pains to master the intricacies of diplomacy and the cautious phraseology of state documents. She had long practice in the craft. She profited by the advice and instruction of the foremost statesmen of the century, many of whom have passed away.

VALUE OF HER EXPERIENCE.

Her great experience and sound common sense were attributes of infinitely higher value in the government of a kingdom than any were intellectual brilliancy. Her opinion was always listened to not only with the deference due to the sovereign, but with the respect inspired by her matured knowledge and sagacity.

As a climax to the ordinary business of every lawful day, at intervals the queen received her ministers and held her cabinet councils. Here, as at her first council, she sat at the head of the council board, the only woman present. Since the prince consort's lamented death, she was unsupported by any member of her family. Liberal or Conservative, during her reign of upward of sixty years, she was the greatest authority on precedent, the one to be appealed to when the annals of past years were in question.

Even cabinet councils did not exhaust the routine of business whose issues were of the gravest with which the queen valiantly and indefatigably contended in joy and sorrow, in strength and weakness, in the infirmities of age. When troubles threatened the body politic, when war and rumors of war vexed the nations, even when a change of ministry was imperative or when the country was in the throes of a genrael election, couriers and posts arrived at all hours with tidings which were bound to be heard, and information which had to be considered. In this light one can understand the half happy, half pathetic sign of relief with which the queen noted in one of the passages from her journal, as the crowning charm of a remote highland retreat in which she took refuge for a few days, that it was well nigh beyond the radius of posts.

If the real business of the queen's day was dispatched quickly enough, she went out for what was once a walk, and later in life a donkey drive in the private grounds. Luncheon, which followed, was a less private meal than breakfast, when the queen, if so disposed, met the members of her household, the guests staying at the palace or the privileged visitors who arrived for luncheon. Princess Christian and her elder daughter—to whom the queen was much attached—were near neighbors of her majesty when she was at Windsor and they were at Cumberland Lodge. They lunched often with her. The Prince and Princess of Wales with their unmarried princess, came down from London, the Duke and Duchess Park, the Duchess of Albany from Claremont.

After luncheon the queen, often in defiance of the weather, took a couple of hours' drive, generally accompanied by Princess Henry of Battenburg, with or without ladies-in-waiting, or a maid of honor. In Scotland and during the queen's spring stay in the Riviera, tea was taken in the course of the afternoon drive. A stoppage was made where a fine view could be commanded, keeping water warm, were carried along with the party. When the queen was young and full of energy she loved a gypsy tea, which meant scrambling up and down a hillside, foraging for sticks to light a fire, accomplishing the kindling, setting out the tea equipage and sitting down triumphantly to eat a well earned meal. In late years tea was got ready with less merry fuss and was drunk leaning back among the carriage cushions.

After her return from her drive, about 6, till dinner at 10.30 or 11, was the queen's period of leisure, the time which, as the children say, was her own. When young, she had many pursuits to fill it up. Both she and the prince consort were skilled musicians and enthusiastic artists—etchers also. With the prince's death the sound of the music in which they had delighted died for many a day out of the queen's palace homes so far as she was concerned. The daughter of music was brought low in another sense than that of the figure used by the wise king. But it was otherwise with her sketching, which she continued to engage in with keen interest when a new subject for her pencil or brush presented itself.

IMMENSE CORRESPONDENCE.

Her majesty had a large private correspondence with her numerous relatives and descendants with which not even her secretary was allowed to intermingle; since childhood she kept a diary with the punctuality and precision of the German side of her individuality. She was a reader on her own account, and through the instrumentality of others, of the newspapers, magazines and books of the day; she showed decided tastes and preferences. Her lighter reading was not unnaturally influenced by the locality for the time. At Balmoral there is a predominance of Scotch literature. It was there that the late Dr. Norman McLeod was wont to read to her from Burns. In the circumscribed grounds of Holyrood she described herself as reading very appropriately Hogg's "Queen's Wake," a volume suggested to her by her faithful attendant, John Brown. A Scotch novelist some time dead who was modestly proud of his queen's appreciation of his Scotch stories was Charles Gibbon, author of "In Honor Bound," "Katherine Janfarie," "Auld Robin Gray," etc. Queen Victoria took up the study of Hindustanese in her '80s. The same sympathy with the natives of the strange and wonderful lands of which she is empress induced her to replace her Highland bodyguard of personal attendants by those Indian servants whose dusky faces and gorgeous attire added a vividly picturesque element to the royal cavalcade, when it appeared in public.

The queen was always fond of pets—of dogs above all. It is alleged that for her better protection against any treacherous attempts on her life a large dog—mastiff or collie—had its quarters with a trusty servant in the immediate vicinity of the queen's rooms. The precaution was certainly taken when her majesty was paying visits or staying in strange houses.

FONDNESS FOR CHILDREN.

But the queen had other and better pets. The mother of a large family, the grandmother and great- grandmother of many descendants, she was rarely without the presence of little children to bring gleams of sunshine into her life even when it was in deepest shadow. If ever the "children's hour" was kept uninvaded and sacred in any house it was at Windsor, Osborne and Balmoral. The fatherless boys and girls of Princess Henry of Battenberg, were seldom absent from the queen's home for long at a time; Prince Edward, of York, her ultimate hier, and his baby brother and sister were committed to the grandmotherly care in the absence of their father and mother, just as the Duke and Duchess of Connaught's children were when their parents were in India. A comical story illustrative of the queen's love for children got into print. A little girl related to one of the ladies of the household was permitted to lunch alone with the queen when ducklings were included in the menu. Her majesty took a wing between her fingers to pick it. Her companion, fresh from the strict rules of the nursery, raised a warning finger and cried: "Oh, piggy wiggy!"

Dinner was the last function of the day in the royal household and was something of a court ceremonial, taken in court evening dress with court surroundings. If the queen had guests, they assembled in the corridor and waited for entrace, when she greeted one or other of the company as she passed on to what might happen to be the great dining room for the occasion. She sat at the center of one side of the table, the guests of highest rank on her right hand, if no member of her royal family was present. The military band played a selection of music (at Balmoral the queen's pipers made the music, marching round at the back of the company). No one in the queen's vicinity spoke until he or she is addressed by her majesty. When the ladies left the table the gentlemen remained behind for from a quarter to half an hour till they joined the ladies in the drawing room. When the queen was first married it was said that she had a habit of standing till the gentlemen, led by the prince consort, the most temperate of men, appeared on the scene. A brief space intervened before the queen dispensed the company by retiring for the night.

SUNDAY A DAY OF REST.

Sunday was, of course, a day of rest for the queen as for the vast body of working men and women in her dominions. She joined in public worship in her private chapel, in the village church of Whippingham, or in the Scotch Kirk at Crathie of which she was a member as she is also a member of the Church of England.

The queen in her later years clung closely to tradition. She was disturbed if the furniture or the appearance of any part of her dwelling was changed the slightest. It was only after long argument that she permitted the castle at Windsor and the Royal Mausoleum to be lighted with electricity and she was greatly shocked and displeased on hearing that the remains of the Duke of Westminster had been cremated, though by his own order.

THE WORLD'S PROGRESS DURING VICTORIA'S REIGN.

While Victoria was on the throne, serfdom was abolished in Russia and slavery done away with in the United States and Brazil. Russia lost some territory in Europe, but gained in Asia. Turkey sank from a first rate to a no rate power. Spain descended from a leading place to near the foot of the roll of nations. Africa was largely explored, and the dark places on its map nearly all cleared up. The age of steam, only fairly begun when she ascended the throne, reached its highest estate apparently, and the age of electricity was ushered in before she died, the telegraph, the telephone, electric lighting and electric transportation all coming into being. The advance in science generally was marvelous. Literature and the useful arts flourished as never before. Education was more widely diffused, and the newspaper press became a factor in affairs. The cause of constitutional government progressed everywhere in the civilized world save perhaps in Russia. Even in far away Japan the old forms of government were superseded. In short, the progress of the world in nearly every direction during Victoria's reign was greater than ever before.

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anced ration, followed by the tables prepared by Professor Cowgill of the KANSAS FARMER, will soon teach the farmer boy how to feed cattle so as to pay him for his time, feed and risks, and place the balance on the right side of the ledger, especially if he has learned the meaning of the words, protien, carbohydrate, and fat, with their application to the feeds used and their value and purposes in the beef making process.

ENTOMOLOGY.

It is estimated that $200,000,000 worth of farm and orchard products are destroped annually by noxious insects. The depredations of insects seem to be on the increase. Our orchards and field crops in Kansas are damaged to the extent of many millions each year. The fruits of our orchards are damaged by the codling moth to an alarming extent; the market value of the crop is destroyed to one-half the annual value. The Kansas farmer is subjected to the damage of his wheat field by the Hessian fly and the chints bug. Grasshoppers are a menace to young alfalfa, and often to meadows, and other crops. The curculio has practically destroped the plum, and is rendering the peach and cherry crop an uncertain venture. The state and people of California have spent many millions of dollars to prevent the ravages and to destroy the "San Jose" scale that has been so destructive to the fruit industries of that state. The territory east of the Rocky Mountains is threatened with an invasion of some of those noxious insects, while the "San Jose" scale has already made its appearance in several places in states east of this. The state of Massachusetts has spent several millions of dollars in its effort to destroy within her own limits the gypsy moth, an insect that is menacing the life of every fruit bearing tree and shrub in that state. It is yet confined to the limits of that state, but if it gets beyond is present limits, when less vigilent means are adopted for its destruction, the whole power of our national government might be unable to stay its ravages. Our young men should have the opportunity in our common schools to learn all about the habits and destructive nature of the most common and dangerous insects that inhabit our state, and the best means to combat and prevent their ravages, and be adivsed as to the dangers of others that might, if proper precaution and vigilance are not exercised, become permanently located in our state. There are many parasites that prey on these noxious insects, destroying them in various ways. Some prey on the eggs, some destroy them in the chrysolis state, while others destroy the mature insects, thus showing us that nature will help us if we will try to help ourselves. We must know the parasites and protect them if we can, and aid in their propagation. There is a class of insects known as ichneumon flies that are very destructive to noxious insects. We ought to know them, and protect them, if we can. It pays to stand by our friends in the insect world as well as in other places.

ORNITHOLOGY.

A short treatise on birds should follow entomology as part of the education that the farmer's boy should receive in the common school. The birds are the most vigilant friends the farmer and fruit-grower has. They are always at work destroying the noxious insects that prey on the products of the field, orchard and garden. If it were not for this unceasing work of our feathered friends it would be almost impossible to raise certain crops with profit. It is history that in places when certain kinds have been destroyed the raising of certain crops had to be abandoned. Hence the protection of our birds ought to be impressed on the minds of the young men so that at all times they should be cared for and encouraged to build their nests and rear their young on the farms. Different kinds of birds destroy different kinds of insects, both on threes, on the ground, and in the ground. A pair of redbrested robins will, in a short time, free a garden of cut worms. They thrust their bills into the burrows of the worm and pull it out, and destroy it. Each kind of bird seems to have its allotted place in the economy of nature and all working on different lines, but all in the interest of the farmer. Let us teach our boys the value of the birds and then they will protect them.

BOTANY.

Our farmer boys know the names of the various farm crops and their general uses. But they should know more. They do know how to plant corn. How it grows; how to harvest it, and care for it. They ought to understand enough of botany to know what the corn is—its constituent parts, the structure of its different parts; the nature of the tissues and the various uses of the plant as well as of the grain. Botany is the science of plants, and this science should be known and understood by the young farmer boy. He should be able to apply this science to other crops—to the wheat and the oats and other crops raised on the farm. This knowledge should extend to the grasses—timothy, blue-grass, red top, etc.; to the clovers—red and white clover, alfalfa and other legumes that enter into the feed rations of the farm stock. This knowledge would teach him the feeding value of the different grasses, and from this he would soon learn their special value in connection with his particular farm or stock interests. If he were engaged in the fruit-growing business he would find this knowledge worth many dollars to him and it would save him many dollars and much experimentation. He would also learn something of the adaptation of the grains, grasses and fruit trees to his locality and the soil of his farm.

This information should be had in the lessons in the common schools. Such a book could and should be prepared under the direction of the superintendent of schools. The article on zöology or zoötomy could be prepared by the veterinary professor of our agricultural college. The articles on entomology or ornithology and botany could be prepared by the professor at the agricultural college or state university. An appropriation of about $300 would pay for needed cuts and for the extra services of the professors who would prepare the different articles for the book. The book, or reader, could be published in the same manner as other school books are now published or the work let out to some publishing house which could and would do all the work of preparing the book and printing it ready for use in the schools.

With such knowledge and information that would be thus imparted to our young men by our common schools they would be well equipped for the race of life and for business on the farm. Let us make the common school useful to those whose circumstances will not enable them to take advantage of the educational facilities that our more fortunate young men enjoy.

DISCUSSION.

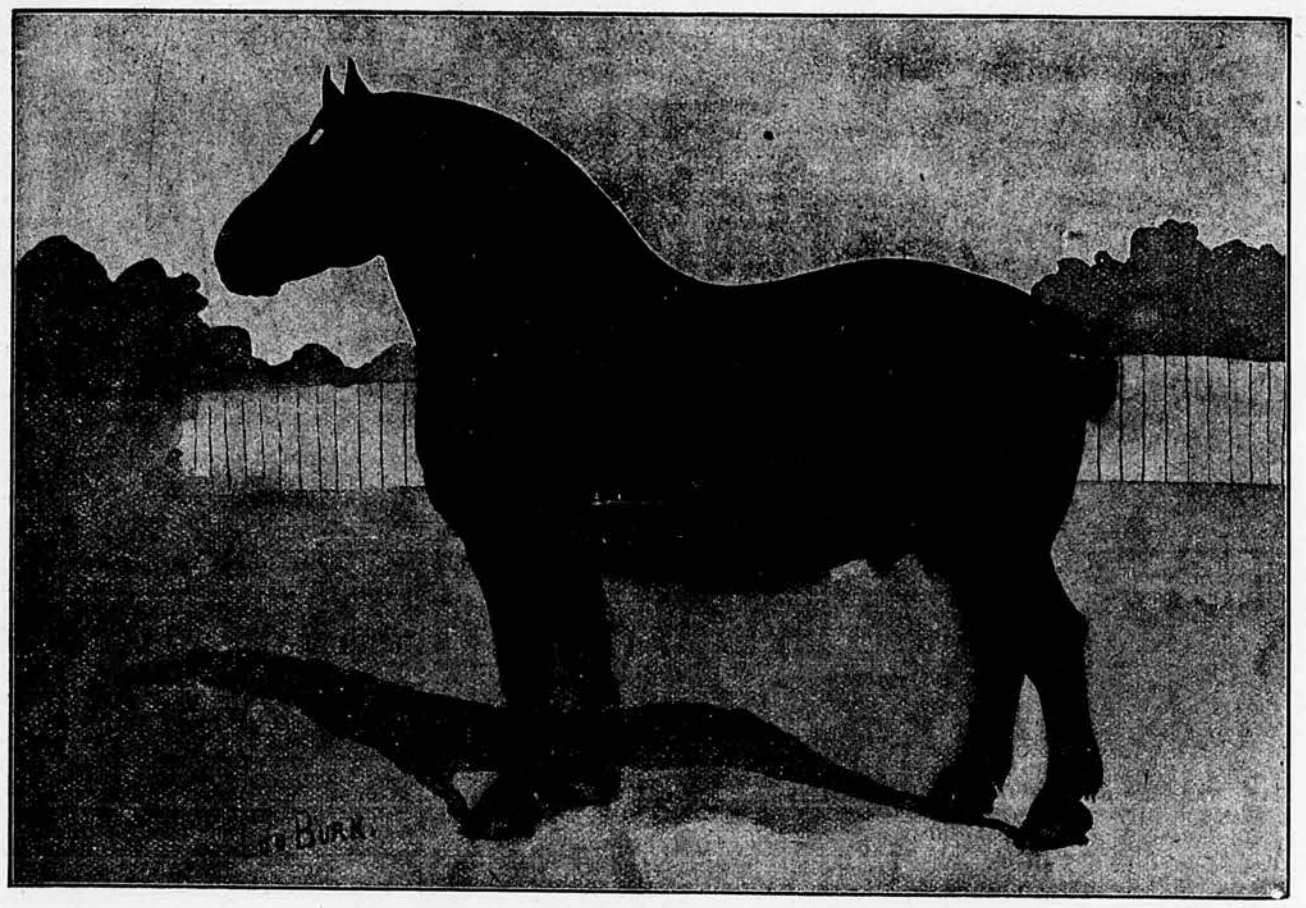
Question: The governor has given some excellent advice for the farmers' sons, what advice has he got to give for the daughters?

Answer: The remarks I have made might just as well apply to the girls, only that it was the boys I was speaking of. Still there are some special lines the girls might be educated in that would be of immense benefit and advantage to the young men they expect to marry. The special matters to which I have referred have related to the education of the young man on the farm, and I think it one of the most important things that could be adopted in our school system; and there is no reason why it would not be just as easy to teach that as it would be to teach mathematics or anything else.

Prof. Cottrell: We talk about having the greatest agricultural college in the world up there, and we have, if we had a few more acquisitions that are needful. Our attendance is about twice that of any other similar college in the world. We will probably have this year 1,500 students enrolled. It is the only place in the state where the science of horticulture is taught. One boy for each eight country school districts is represented there.

Mr. Harrington: I believe it would be a good idea to have that paper published and laid upon the desk of every member of the legislature, so that they may have an opportunity of studying it and start them to thinking, and the people of the state of Kansas to thinking and much good will come out of it. When our boys are well educated along these lines you will see that the state of Kansas will take a great leap forward and the agricultral interests of the state will then be advanced very materially. Then when our boys are educated in this way they can spend the time instructively and entertainingly, and they will not be at a loss for something to say that will be of interest to the girls. And instead of talking foolishly they will impart to the girls a whole fund of information that will not only do the girls good but will be of interest to the whole state.

Mr. T. M. Potter: I think that paper is the most practical one that has yet been read before the association. It is along the right lines of thought. We must educate our boys to the agricultural interests of the country, and how to promote them. We ought to have this in our public school system. It would be a whole lot better than many things we have to learn at the present time, that is, that our children have to learn. I remember that when I was in school, that if I repeated once I repeated a dozen times "A noun is a person, name or thing." "A noun is a person, name or thing." I do not know whether they have this same system in the schools yet or not, but from what I can hear there is not much difference in it. But if they have it is wrong, and we ought to have more of the things that transpire around us, things that



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will do us some good. We ought to have our curriculum so arranged now so that we could introduce some of the practical things of the farm. This paper ought, as suggested, to be ploced before the legislature, which ought to take some action in the matter. We ought all to come out and say what we think on this question.

Mr. Babcock: I think that paper ought to be placed before the legislators, as has been suggested by a brothtr, and I move that the secretary take some steps in that direction.

Mr. Glick: Of course I thank my friend for making that suggestion, but I do not think the paper is well enough written to present to the legislature.

Mr. Hurst: Alongside of the graded school building there ought to be a manual training school building, and here our girls could be taught domestic science. If we would take up the little country schools all over this state and convert them into agricultural schools, and then we should have to convert our agricultural college into a normal school, because then we could not supply enough students to attend the college. In this way all the important subjects incident to agriculture could be taught with profit, as was suggested last week in the educational meeting.

Mr. Burrton: I did not mean to say a word on this subject, but the words of Mr. Potter called my attention to some resolutions on the subject referred to. I have been accused of being a lobbyist to try and bring about an amendment of the present law in regard to the school books. I denied that charge in the Topeka Capital, and those of you who see the Capital to-morrow morning will see the charge and my denial of it. At the educational meeting the questions as our friends here intimated were discussed and resolutions were passed in regard to the school books. I undertand that at an early day an effort will be made to get other books added to the list of those now prescribed by the Kansas State School Book Commission. And if this body wishes anything along the line of Mr. Glick's paper to be put in book form now is the time to make the move for having it done, because in two years another commission will be elected, and another set of books will be adopted for five years. So that if you do not get it adopted now you will have another commission to take charge of it for five years. I will read the resolutions as passed by the state teachers' association on this subject:

"Be it resolved by the Kansas State Teachers' Association, assembled in its thirty-eighth annual meeting,

That moral and physical training, and the art of education, including such subjects as music, drawing, kindergarten work, and manual training, so far as the time and means will admit, should find a place in the public schools of the state.

That we express our approval of the educational administration of the state as conducted by Superintendent Nelson and the state board of education.

That it be the sense of this association that the coming legislature should so amend the state text book law as to enable the people of Kansas to secure the best text books of the day for the use of their children in the public schools, and that whatever books may be adopted the law should expressly permit the use in school of supplementary books by pupils who possess the adopted books and are using them in good faith."

The governor in his message takes up the resolutions, and recommends that the legislature consider them carefully. So far as I am concerned I am in favor of repealing the law as it now stands, and leaving it to the people to buy a new set of books, and furnish such other books as their needs may require.

Delegate: If this association decides to have that printed and laid on the desk of every legislator, I think there ought to be enough printed so that every teacher in the state may have one too, which in my opinion will do more good than to let the legislators see it.

G. W. Berry introduced the following resolution, which was adopted

"Be it resolved, by the Kansas Improved Stock Breeders' Association, assembled in our eleventh annual session,

That we are in full accord with State Superintendent Frank Nelson and the teachers of Kansas in their effort to have laws passed by the present legislature, providing equitable school taxation and better school books.

Be it further resolved that we favor the addition of a book or books, or chapters in school readers properly prepared, that will teach our boys the principles of agriculture and stock raising, making a specialty of zoölogy, entomology, ornithology and botany as applied to Kansas.

Resolved further that we favor the teaching of elementary domestic science to our girls along the foregoing lines.

Poland-Chinas; Line Upon Line Breeding.

ED. DORSEY, GIRARD, KANS.

A short time ago I received a communication from your honorable secretary, my old friend Mr. Heath, announcing this session of your association, inviting me to attend the same and asking me to prepare a paper for the occasion. To say that his letter gave me pleasure is putting the matter mildly. Its receipt brought back the memory of the days of the later 80s and the early 90s, during which I attended several sessions of this association, and at which time Mr. N. H. Gentry, of Sedalia, Mo., and myself were the only honorable members from outside of Kansas.

Prior to 1891 I had been an exhibitor in this city at the Kansas state fair for every year following its organization, and many were the warm friendships formed during that period. Among the friends that I remember, a number of whom are still prominently connected with this society and others scattered in different parts of the state and country, are the following:

The first on the list is Uncle Phillips, that grand old man who, through the efforts of my father and myself and others, came so near receiving the appointment of superintendent of the World's Fair, and was only defeated by the efforts of eastern breeders.

Another good friend, of the olden time, was M. B. Keggy, then assistant superintendent of the Kansas state fair, than whom no better man could have been chosen for that position.

Still another is George Barry, who was at that time secretary of this association, and a smiling, pleasant exhibitor.

Following him comes the memory of Brother Howey, who, as far as height was concerned, reached closer to heaven than any of the rest of us, and whose long drawn out form reminded one of a pine tree among the scrups on an Arkansas mountain.

Then comes Brother T. A. Hubbard, that genial soul with a heart as big as a slop barrel; followed by Willis E. Gresham, who is, as everybody knows, a twin brother in appearance and talking qualities of Brother Howey, and who staunchly advocated score cards until he learned better. Somehow or other, it runs in my mind that Friend Willis, together with "the Dutchman," whose name I have forgotten but who will be remembered by all older ones, got lost one night while walking in from the fair grounds to one of the meetings of this association and was out in a soaking rain till about 3 o'clock the next morning .

Other well remembered friends are: Brother Hanna, an impartial judge and a prominent writer on stock matters; F. D. Coburn, the present secretary of the state board of agriculture, and the president of this association at that time; that fine old man, Uncle Rankin Baldridge, better known to all the boys as "I Gad," who with my father are the only men in the United States who have been exhibiting continuously for half a century; and last, but not least, your secretary, Mr. Heath, who has done as much, if not more, for the stock interests of Kansas as any man in the state; always faithful to the cause and a hard worker. To his credit it must be said that in the KANSAS FARMER Brother Heath publishes the best stock and agricultural paper in the West.

In his letter your secretary asked me to favor this meeting with a paper on "Poland-Chinas: Line Upon Line Breeding."

At the time when I used to exhibit at the Kansas state fair, I was more or less extensively engaged in the Poland-China business, with my home and headquarters in Perry, Ill., and while I am still true to my first love, in so far as swine is concerned. I am glad to say that since then I have become a "Jayhawker;" and although I am yet a very young one, still I am as enthusiastic about the old state as the oldest Jayhawker in it.

My faith in Kansas and in Poland-China swine is based on the fact that I believe that they are both the best of their kinds. If I had ever doubted for an instant that the Poland-China was the best all-purpose hog in existence, I would then and there have engaged in breeding the kind that I thought better, and, pursuing the same line of thought, I should never have come to Kansas if I had not been certain that

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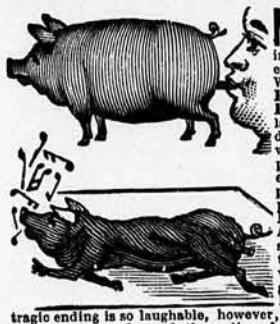
OUR STABLES are located corner Ninth and R Streets. Our office on the ground floor of the Burr Block TWELFTH AND O STREETS. We invite inspection. No trouble to SHOW HORSES. Visitors welcome.



NOT A PIG in a poke, but did you ever hear a Pig Sing? Well, this Musical Pig right from the Paris Exposition is the latest and greatest wonder out. More fun with this cute little porker than anything ever invented. You simply blow him up like the picture here then the Pig begins to Sing. After singing awhile he squeals, then collapses, then gives up the ghost with a last faint grunt and finally dies. Everything about the tragic ending is so laughable, however, that you nearly burst with hilarity, so funny is the ending of poor Piggy. Thousands of these Musical Dying Pigs were sold in Paris at the Exposition and they are now all the rage in New York. Don't fail to get one if you want some fun. They are strongly made of a thin rubber substance so you can carry them in your vest pocket and suddenly blow him up and then there is more fun ahead than a box of monkeys. Just get one and try it. Agents can sell them at the rate of a hundred an hour in a crowd. We send one FREE with 15c. six months' trial subscription to our great family monthly; 2 for 25c., 5 for 50c. and one year's subscription; one doz. $1.00. postpaid. Address COMFORT, Box 818, AUGUSTA, MAINE.

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Make Butter in two minutes before ten farmers and nine will buy.

One agent made butter in 58 seconds, and got 10 lbs. of butter. The old style churn he says will only produce 9 lbs. of butter from same amount of cream in 30 minutes. Write for circulars and wholesale price list. Address, The Boss Churn Co., Dep't 4, 619-623 Main St., Cincinnati O.

this grand old state was the best of "Uncle Sam's" litter.

In the first place, both the Poland-China and state of Kansas are purely American productions, and I am an American, first, last, and all the time; secondly—both have been developed by men who were determined to excel in all points, and who have done so in spite of all opposition; and lastly—when a man is associating with either Poland-Chinas or Kansans he is in exceedingly good company.

Now, having convinced all of you beyond a doubt that Poland-Chinas and Kansans are the best breeds of their kinds in existence, I will ask your attention to a few words about "line breeding." However, having come from Illinois, from the near neighborhood of the Klever's Model boom, perhaps I would better not speak very extensively about swine breeding of any kind, and what I do have to say, mention it in a whisper.

"Line breeding" has proved a decided success in my case; so much so, in fact, that, while I am still a Poland-China enthusiast, I have added other "lines" until I at last landed in Kansas and am now engaged in the Cleveland Bay horse business, with my stables down in Crawford County, at Girard.

Yes, truly, I have been successful with "line breeding!"

Joking aside, the fact of the matter is that what I know about "line breeding," in the sense intended by Brother Heath, would not fill a very large book or even a pamphlet.

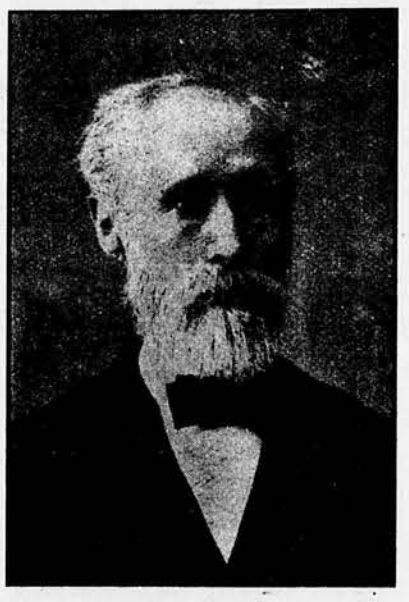
This paper on that subject is already too lengthy, so I will close by stating that I have taken advantage of this meeting and Brother Heath's kind invitation to not only touch very lightly on the Poland-China business, but to revive the memories of other happy similar occasions of the past, and to present in my feeble way the close-breeding, the in-breeding, the out-breeding, the cross-breeding, and lastly, but not least, the "line breeding" of some of the old and well beloved "sires" of this association.

Shipping Pedigreed Stock.

The following was a general discussion in which the veteran breeder, D. P. Norton, Dunlap, Kans., contributed the following in the opening discussion:

I wish to call your attention and that of all breeders of pure bred stock, to a subject which has long been on my mind, and which needs a thorough consideration, discussion, agitation and ventilation in all live stock pepars, and by all live stock associations at their public meetings, and by all stockmen all over this great country, and especially the great West. When I think of it, it seems amazing that the subject has not long since been taken up and discussed by our live stock associations and journals, and demands made of the railroads for reforms in the matter of shipments of pedigreed live stock for breeding purposes. It is in the matter of freight charges on pedigreed stock that I enter my complaint, and invite your coöperation in its thorough discussion. When you reflect upon it, as I have, you must admit the subject is a very broad one in all its bearings and the interests involved are very great, not so much to the shipper of pedigreed stock merely, but to the whole community, as well as the railroads themselves.

As I view it the railroads, in their charge for the transportation of pedigreed stock for breeding purposes, adopt a narrow, petty, contracted, short-sighted, selfish and suicidal policy in that they make tneir tariffs for the purpose of getting all they can out of the business, and the result is to hamper the breeder and shipper, and especially to kep him and his distant customer as far apart as possible, and prevent them from doing any business. It is not very long since the railroads adopted a rule to require the shipper of a calf in crate to send an attendant with it, who would be compelled to pay full fare both ways. The agents of some roads, to their credit be it said, having more sense than their principals, ignored the rule entirely, and by roundabout shipping, over indirect routes, at enormous rates, the writer was able to continue his business. It is not very long since the writer sent an humble petition to the officials of a great railroad asking them to please allow his shipments of crated calves to go over their road without an attendant. The request was graciously granted, but the rule still stands and can be enforced at a moment's notice. Not long since the writer was compelled to pay full car rates on two bull calves across three great states of tnis "Old Glory," which a great host of "freemen" worship; your humble servant being one of them. Now for a contrast! Had he been a down trodden subject of "perfidious Albion," and one of the poor "oppressed" people of Canada, who have no "liberties," he could have crated his two calves and sent them flying anywhere in that Dominion at one-half first-class rates with no attendant. In the "land of the free and



D. P. NORTON, DUNLAP, KANS.

The Veteran Shorthorn Breeder, Who is Making a Strong Fight for Better Rate on Shipping Pedigreed Stock.

the home of the brave" he pays three times the freight or one and one-half first-class rates. If he ships a calf of any size uncrated, the railroad assumes he weighs a ton and charges accordingly. If he weighs to exceed a ton, which is the minimum weight of a suckling calf, according to railroad arithmetic, the railroad makes a note of it and charges accordingly. The railroad catches him comin' and a-go-in', and bleeds him at every stage and at every point. It is perfectly capable of demonstration that, from a purely selfish standpoint alone, which is the only one a railroad ever considers, having no soul or conscience, and no fear of the fires in the hereafter, the railroads could not adopt a more unwise, blind, foolish, idiotic, suicidal and scandalous policy for the advancement of their own interests. It is for their true interest to make it as easy as possible for the breeder and his distant customer to get together, and do some business, instead of playing their trump cards to keep them asunder; and the reason is so plain that "he who runs may read," When a good, pure bred bull goes to head a herd of scrub cows, the produce of that bull is increased in size by perhaps 25 per cent and the value probably 50 per cent. The next bull increases the size and value in a less proportion, and so on, and subsequent bulls hold what has been attained, and the railroad hauls them all to the feeding grounds and final markets, at their advanced weights, and the greater prosperity of the owner of such cattle causes him to buy more of the comforts and luxuries of life, and the railroad hauls them back to him.

This argument is susceptible of indefinite extension and expansion. The more good, pure bred bulls that are used in the West the greater the number of market topping steers will the railroads have to haul to the seaboard for the English market. The case is so plain it would seem to need no elaboration of argument, but it needs discussion through the press, and action by our live stock associations, until a reform is secured. It is several years since the railroads of Canada, as an experiment, gave the breeders a low rate on shipments of pedigreed stock for breeding purposes. It came about this way, viz.: The Dominion Cattle Breeders' Association, the Shorthorn Breeders' Association and all the other live stock associations of the Dominion met the railroad officials by appointment, and after several meetings persuaded them to try it. The immediate result was a great increase of shipments, so that what they lost by reduction in rates was more than made up in the receipts of the increased traffic. It has been a great benefit to the breeders as well as to the railroads and the community at large, and the railroads have never seen fit to change it. When a Canadian breeder ships a pure bred animal he furnishes the agent with a certificate of the pedigree. My experience as a breeder is that the exorbitant rates on single shipments of pedigreed stock is a great hindrance to business, especially with distant customers. They generally want to know what the freight will be. When an approximate estimate of the freight is given the chances are that we hear no more from the would-be customer. It is unpleasant to reflect upon the consequences.

—

Mr. Glick: The question of freight rates is one of much importance to the breders and shippers of pure bred stock. It often happens that a prospective purchaser, on ascertaining the freight rates refuses to buy, and in this way the breeder loses many a good sale. I have had chances to sell pure bred bulls in Colorado, Wyoming, and Utah, but lost the sales on account of the heavy freight rates charged on the animals. The buyer declined to pay it. If the rates were fair, an dinducement held out to men in the western part of the state, and in other western states to buy pure bred bulls, it would more than double the business in Kansas, and it would take Kansas breeders entirely out of competition with breeders further east.

When I commenced breeding thirty-four years ago, you could tie a calf up and send it along with other freight without special charge. Now you must crate it, and send an individual along with it. The whole west would be customers of Kansas breeders if rates were reduced so that these people could buy from us with any kind of satisfaction at all. In one instance when about to make a sale of bull calves, I was informed by the prospective purchasers that the freight rate would amount to twice what I asked for the calves, and I was not selling bulls at an exhorbitant price either.

A committee should be appointed to confer with the railroad managers, and present the question to them in any way that it could be presented. The western freight associations would then take the matter up, and would no doubt favorably consider the claims of the breeders for lower rates. This should be a matter of representation between the breeders and the railroad companies. It is to the interest of the companies as well as to the breeder.

I am not now engaged in breeding, yet I know the difficulties of breeders in selling pure bred cattle to people at a distance. When men have to pay $25 and $50 and $75 on a calf to ship to Colorado and other western states they won't pay it, and as Mr. Norton shows the railroads are losers. When you ship good cattle you pay more to railroads than when you ship scrub cattle.

Mr. Kirkpatrick: We are all agreed on one thing on this question—the rates are exceedingly unfavorably. Not only the freight, but the express rates are little short of extortionate. I look it in the face, and having had some experience with railroad people, I consider it a herculean task to handle this thing and do it successfully. The rates as being demanded by the express companies are a matter of great abuse, and we ought to do something to correct it. The secretary mentioned some discussion which took place at Chicago. I would like to know if anything was said there in regard to this question.

Mr. Thrall: I would like to speak of this matter both from the standpoint of a breeder, and from the standpoint of a man who has a high interest in the transfer of pure bred stock all over the country. The remarks that have already been made here apply to all classes of stock.

I would like to call the attention of the members of this association to some methods of transportation of pure bred stock in Canada. The people at the Chicago show there were amazed to find that no provision had been made by American railroads to ship pure bred stock, as had been done by the Canadian railroads. One railroad furnished free transportation for pure bred stock. The other railroads made an agreement with the stock associations to make half fare. All a Canadian has to do now to secure half fare on the railroads for pure bred stock is to present a certificate of registration from his association, and the railroad company grants the rate

No matter what kind of stock we raise, it is important for us to stand together. The question is, what is the best method of procedure in order to secure what we want from the railroad companies? It was our opinion at Chi-

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cago that if all the breders of pure bred stock in the United States will agree among themself to appoint committees to wait upon the railroad companies this might be brought about. It ought to be shown the companies that it will be to the advantage of both the companies and the breeders to make an arrangement of the nature referred to. The very fact that pure bred animals are being shipped out along the line of any road is going to make a paying business for that road. If we will bring this matter up before the railroad companies, and ask for relief through our paper, it looks to me as if this would be a good way to go at it. I hope that as breeders of the state of Kansas we will go on record as to what the breeders of Kansas want, in relation to this question. We can then go to the breeders of other states, and by all of us getting together I think we can get what we want.

Mr. Nelson: I think Mr. Glick is right when he says many sales are lost on account of parties inquiring as to the freight rates on pure bred animals. And I always think there ought to be a remedy for every disease. I think the suggestions of Mr. Glick are very appropriate. We must persuade the railroads to meet us in this matter. In this instance they have the upper hand on us. We have to dance to their music sometimes of course. But I think we can have them reduce the transportation rates on such stock as we have to dispose of. I move that we act upon Mr. Glick's suggestion, and appoint a committee of three or more to correspond or communicate with the railroad officials, so that we may be able to effect something of this kind. We ought to make hay while the sun shines, and if we have theinterests of the stock breeders all over this state and other states at heart, now is the time for us to do something for them. Every man here to-day is interested more or less in thoroughbred stock, and if we can work up a trade with people to whom we have to ship, by securing lower freight rates it will be very much to our interest to do so. And not only to our interests, but to those of the people further west, and to all with whom we deal. I think we ought to adopt Mr. Glick's suggestion, and appoint a committee of two or more to consult with the railroad officials.

Mr. Benedict: I believe in the reduction of the freight rates. But I do not think we should jump into this without first notifying the railroads of our intention. I think when they learn that we are in earnest they will be willing to meet us half way in any proposition we may have to offer them, and be as good to the breeders and shippers of Kansas in future as they have in the past.

Mr. John Warner: This suggestion of Governor Glick is very good. I think it would be well to have a committee of three, taking one from three of the representative breeds of cattle. We should have one good man each from about three of the leading breeds, and they should look after the express as well as freight rates. That the committee should also look after the routing of the stock.

Mr. Babcock: I move that the president of the association be the chairman of that committee. Motion carried.

Mr. E. Harrington: Railroads do not recognize any state lines. Any business breeders of Kansas do is probably going to be done beyond Kansas state lines. Anything we get out of the railroad companies has to be done in such a way as will amount to a remonstrance against the present freight rates on pure bred animals, and this remonstrance must be from the whole breeding people of Kansas, and not just from a few of them, as well as from the breeders of all the other states of the Union. If the companies see that the matter is not local but national—if they see that all the breeders are interested in this, we might get them to listen to us. The committee we appoint here should confer with the committees of other organizations of other states. The matter should be brought before the National Live Stock Association.

The standing committee to confer with railroad and express companies are as follows: O. P. Updegraff, C. A. Stannard, and J. W. Robison.

Preventive Vaccination for Blackleg.

J. E. SHURTLE, KANSAS CITY, MO.

It is not generally understood that the disease called blackleg is produced by a distinct and specific germ or microbe originating in the soil and conveyed to the anmal's system in its food, through scratches or wounds, from the dead bodies of infected animals, from infected pastures, and many other similar means. The disease has existed for ages, but its origin, cause, and the means of prevention have only been discovered within the last quarter of a century.

Blackleg, or symptomatic anthrax as it is sometimes called, prevails in almost every country where cattle are raised, and appears not only in high altitudes, but in valleys and lowlands. As a rule, in this country, it is most prevalent in the fall and in spring when young grass appears. Calves, when winter pastured on wheat or other green food, are particularly liable to the disease, and also when being fattened on corn or cotton-seed-meal. In Kansas and the territories cattle between the ages of 6 and 18 months seem to be most susceptible to blackleg, and deaths before or after that are comparatively few, and principally among pure bred calves which sometimes become susceptible to blackleg when only 2 weeks old.

Symptoms:—Every stockman is familiar with the symptoms of blackleg. Briefly described, they are as follows: Fever and loss of appetite, suspended rumination, lameness and a swelling, generally in the hind quarters and occasionally in the shoulder. The animal will repeatedly lie down, and rise, and in some cases, when the disease progresses rapidly, it will not rise after once lying down. As a rule, death ensues in from twelve to twenty-four hours. If the hand is passed over the swollen quarter of the dead animal, the hide appears dry, a cracklink sound will be heard, caused by gas being collected underneath. The entire body soon becomes swollen and the affected quarter, when cut into, emits a frothy, dark- red, disagreeable smelling fluid or gas, and shows a bruised or gellified appearance considerably discolored, which originated the name of "blackleg."

Treatment.—Prevention—It is almost needless to say there is no cure for blackleg. That is a universally recognized fact. In very rare instances when an animal is taken in the early stages, vigorous exercise by running it over the pasture effects a cure. Such cures, however, are extremely isolated, and even if effective will not prevent the remainder of the herd from contracting the disease. Roweling, setoning, nerving, and all such operations do not immunize an animal. They simply retard its improvement of condition by causing a running sore, thus temporarily preventing blackleg, it being well known that only those animals in a thrifty or improving condition take blackleg. There is but one true and scientific method of preventing blackleg, and that is by vaccinating after the Pasteur method with vaccine made from blackleg-infected tissues.

Vaccination.—It is well known that the human family is protected from small-pox by vaccination. Cattle, in the same way, can be protected against blackleg by vaccination with blackleg vaccine. In 1880, after years of diligent research, the celebrated French scientist Louis Pasteur discovered a preventive or vaccine against anthrax proper, which was soon after followed by the discovery of vaccine for blackleg. Vaccination against these diseases has now been in general and successful use for nearly twenty years in Europe and Australia, and nearly six years in this country. Results have also been wonderfully successful and are familiar to most cattlemen, having been published in pamphlet form. Millions of cattle have been treated, reducing losses from blackleg in herds where Pasteur vaccine has been used from an average of 10 per cent to an average of one-third of 1 per cent. Its success has long since been firmly established and any one who disputes the efficacy of the principle of vaccination may be put down as a "back number."

Method of Treatment.—When vaccination of cattle was first commenced in this country the "double application" vaccine was used. This form of vaccine, consisting of first lymph and second lymph applied at an interval of eight days, is known to be the safest and best, and is commonly used in Europe where the herds are small, gentle, and always at hand. It being found often inconvenient or impracticable in this country to handle the cattle twice, the "single application" was subsequently introduced and is now generally and successfully used. "Single" and "double" application vaccines are furnished in the form of a powder, which must be mixed, filtered and injected hypodermically. This operation necessitates the use of a vaccinating "outfit" which includes syringe, pestel, mortar, funnel, and filters. Objections have at times been made to the trouble of preparation or to the cost of the vaccinating "outfit," but these objections were overcome when the Pasteur people devised a form of vaccine which is ready for use as furnished and is used with one application. This consists in several strands of cotton thred impregnated with blackleg vaccine, dried, and put up in packets containing 10, 20 and 50 doses, respectively. Each packet contains a needle. To vaccinate a calf, the needle, after being threaded, is inserted crosswise in the under part of the animal's tail and about 1 inch of vaccine cord drawn in. The remainder is then clipped off, and the portion of cord left in the tail contains a dose of vaccine matter, which in a few days becomes absorbed in the system, and the animal is duly vaccinated. This preparation was thoroughly tested over two years and proved to be equally as effective as single vaccine. Since the introduction of this vaccinal cord eighteen months ago, over 300,000 calves have been treated with this form of the vaccine alone in the United States, and the results have been as satisfactory as if the old single vaccine in the powder form had been used, while the saving in time and money has been very considerable. This method being so simple, economical and expeditious is rapidly superseding the single powder vaccine, but the double (powder) vaccine should always be used on pure bred or valuable stock.

Time to Vaccinate.—Cattle can be safely vaccinated at any time of the year. Seeing that blackleg is more prevalent in the spring and fall, cattle, generally speaking, should be vaccinated just before these seasons. As to age at which to vaccinate, it is best when it can safely be done to defer the operation till the calves are five or six months old. In some sections of the country, calves contract blackleg at a very early age. It may be stated therefore, the calves should be vaccinated just before the age at which local or individual experience has shown that animals are susceptible to the disease.

Many cattlemen wait till blackleg has killed one or more of their calves before vaccinating. This is extremely unwise, as it frequently happens that the disease will suddenly appear and several head may be lost in a few hours or days, or before the vaccine can be procured and used. As it takes several days after treatment before the vaccine takes effect, there may be considerable loss in an infected herd even after vaccination. One yearling will pay for over a hundred doses of vaccine, and in this matter it is invariably a case of prevention being better than cure.

The following figures show the number of cattle treated in the United States alone with the Pasteur vaccines of all three kinds (single, double, and cord) since the introduction of blackleg vaccination in 1895. They are interesting, as showing the growth of commercial vaccination in this country:

	Head.
1895	5,000
1896	27,000
1897	150,000
1898	430,000
1899	700,000
1900	1,000,000

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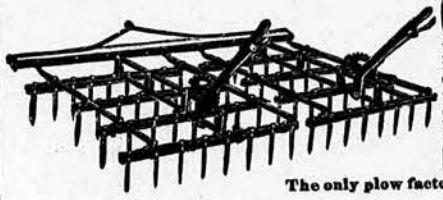
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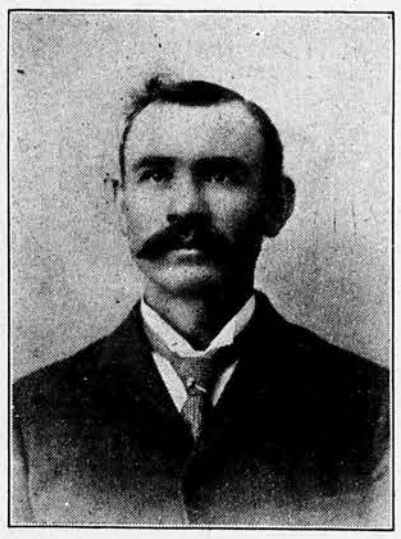

WILKIE BLAIR, GIRARD, KANS.

Holstein. The advocates of these breeds have loudly proclaimed to the world their wonderful milk and butter records, even claiming that no other than the special dairy cow would pay for the feed she consumed.

A number of years ago, Professor Shaw wrote: "Push this specialist theory to its legitimate conclusions and what does it mean? Simply this, that in the production of beefing animals a time would come when a cow would not be able to rear her calf; and that in the production of dairy animals a time would come when we would get living skeletons made up very largely of a bony frame-work covered with skin." This prediction has even now almost come to pass. Each generation has carried these special breed monstrosities of bone and skin farther and farther from the real thing—a cow. The special beef breed men have continued to deviate from the real thing—a cow, by breeding on the beef and out the milk. The Shorthorn breeders have been breeding out the milking trait, long cherished and fostered by the early breeders. The Hereford and Angus breeders have always sought beef, at the expense of milk. Thus this special idea has been carried to excess, until Professor Shaw's prediction has actually come to pass; and we have many individuals of the beef breeds unable to raise her calf, while on the other hand there has been a special dairy animal produced, which is almost worthless for beef. This special breed is driving men on, recklessly on, until the dairy breeds are already stranded and the block test at the recent Chicago fat stock show raises to the special beef breed men the warning hand, "Too much fat in proportion to lean."

In reference to the grade Hereford steer, Bib Hooker, the Breeder's Gazette says: "There was very little lean meat left on the ribs; the huge layer of fat had eaten it up." Of the pure-bred Hereford, Old Times, that paper says: "The proportion of fat to lean was undue." Of the Angus steer, Good Times, it also says: "The knife told the same old tale—there was a bit too much fat mixed in with the lean and laying on the outside." This block test hung out the red light—the danger signal is shining. Will the special beef advocates heed the warning?

While, during the past century, each special breed, in its day, has been praised in glowing words and pictured in gaudy style, there has existed from time remote, in the east counties of England, a modest breed of cattle—the Red Polled, the dual-purpose breed—whose merits to the outside world have been seldom told, and whose praises seldom sung. The improvement of the breed was begun over a century ago, but it was not until 1874 that a herd-book was established; yet some of the animals recorded therein were calved as early as 1848; and during the past thirty years wonderful progress has been made in the way of improvement.

Special breed theorists tell us, "There is no dual-purpose breed; there never will be a dual-purpose breed; it is a myth, a delusion; milk and beef can not be combined in one breed," but actual tests upon the block and at the pail, year after year, over and over again, prove that there is a dual-purpose breed, and that that breed is the Red Polled.

While figures are prosy they do not lie, and to bear out my assertion that Red Polled cattle are equal, if not superior, to the special-purpose breeds, as dairy cows, I present the following, furnished me by V. T. Hills, of Delaware, Ohio:

"Ohio State Dairy Test for 1900."

"We find in this test 67 cows entered —58 Holsteins, 6 Jerseys and 3 Red Polls, the latter all from my herd. In the score for awards of premiums thirty points are allowed for each pound of butter-fat, as found by Babcock test chemical analysis, and six points for each pound of other solids.

The following table, which I have compiled from the official report of these tests shows the average for each breed, and as a comparison of breeds is valuable:

Average.	Per cent of butter fat.	Per cent solids not fat.	Per cent total solids.	Milk. pounds.	Butter fat. pounds.	Solids not fat. lbs.	Points scored.
Holsteins	3.34	8.50	11.84	51.6	1.73	4.37	78.2
Red Polls	3.90	9.23	13.13	45.4	1.76	4.14	77.8
Jerseys	4.40	9.53	13.93	32.3	1.41	3.08	60.8

It may be presumed that the cows entered in this test were good, if not the very best, representatives of their breeds, and, therefore, this test is one of the most reliable as to character of the breeds in milk and butter production.

This is the strongest argument I have ever seen made for our breed in dairy lines and ought to be conclusive."

In the Red Polled Cattle Club milk test for 1900, a cow, No. 9689, Popsey 3d U 43, the property of V. T. Hills and bred by Lord Amherst of England, took first prize for single cow; having given 57.4 pounds of milk in one day, which tested 3.77 per cent butter fat; and second on Mayflower 2d with a record of 40.95 pounds of milk, which tested 4.36 per cent fat. Leaving out these best two cows, the same breeder won first prize for best herd of 5 cows, which averaged over 33 pounds of milk per day with an average of more than 4 per cent fat. Fifteen cows in the same herd during 1900 made an average for twelve months of 7632 pounds of milk per cow, and two of the best ones were milked only seven months and were still in a good flow, but the average is made for twelve months, for the 15 cows. The average butter fat for the fifteen cows is 4.27 per cent, and the amount of butter produced per cow is 382 pounds.

As to beef qualities, I will not burden this paper by giving glowing records of the hundreds of animals of the breed shown at the fat stock shows of England, many of which are seldom, if ever, surpassed. I desire to call your attention only to the Red Polls exhibited at the recent International Live Stock Exposition at Chicago. In the 2-year-old class we find the Red Polled steer, Star, exhibited by V. T. Hills, of Ohio, who says of this animal: "I had not the least idea of exhibiting this steer until six months ago. He was an inferior calf, castrated for that reason. He was somewhat leggy and not good in the hind quarter; not the kind of an animal one would select to make a champion steer. His weight, when he left my farm before shipment, was 1820 pounds. He weighed at Chicago after shrinkage, 1715 pounds. He was put in the slaughter test, dressed out 64.55 per cent of his live weight, and was sold for me, by Messrs. Armor & Co., for $119.98, bringing me $6.99½ per hundred pounds of his live weight at Chicago, equivolent to $6.59 per 100 pounds live weight at home. If we can make so good a record with inferior calves, what may we hope to do when we castrate some of the good ones?" The Breeders Gazette said of this steer: "Star presented one of the most beautiful and profitable carcasses on the hooks. He had roasts of equal thickness to the champion and much better marbled, and he had no more excess of fat." This steer was excelled in size only by the grade Hereford, Big Hooker. Of the other Red Polled steers exhibited, there was a yearling aged exactly 20 months, whose live weight was 1,190 pounds; a yearling exact age 19 months, 985 pounds; a calf 10½ months old, weight 800 pounds; and all of these animals were inferior calves. This shows that the dual-purpose Red Polls compared in size with any of the special beef breeds and in quality they were equal to the best.

If I should attempt to describe my ideal Red Polled cow I would say, she is one that when milking does not take on flesh, but when dry fattens readily. And we have them, lots of them. To be a good milker she does not necessarily have to be the type of the special-purpose dairy cow. The sharp shoulder, the cutaway hams, the slab sides and the raw-boneness are not essential to the dual-purpose cow; neither is the wide escutcheon a criterion by which to judge her milking qualities. In fact, the escutcheon theory should be classed with the other stuperstitious ideas, such as planting seeds at certain times of the moon and the castrating of animals when the zodiacal signs are right. But I would have prominent milk veins and deep milk wells. She should be of dark red color, medium size, weighing 1,100 to 1,300 pounds in breeding flesh. I think many breeders injure the breed by seeking size at the expense of symmetrical form. I would have the rump better filled out at the corners and bring down the high tail head, widen the loin and lower the flank. I would give her the style of the Bates Shorthorn. Many Bates Shorthorns were splendid dual-purpose cows, and it was an unfortunate day for the breed when the special breed theorists robbed the Shorthorn of her grandest qualification, that motherly endowment—the ability to rear well her calf.

The first importation of Red Polled cattle was made to the United States by G. F. Tabor, of New York, in 1873, and many animals of the breed now in this country trace to these four calves; a bull, Ravinewood Beau, and three heifers, Ravinewood Belle, Ravinewood Lass, and Ocean Maid.

After seventeen years, there are now over 5,000 registered Red Polls in America, and only about 3,000 in England. For this breed there has been adopted the best system of registering to be found in existence, which is under the auspices of the Red Polled Cattle Club of America, of which P. G. Henderson,

Personals.

Mrs. E. P. Green has recovered from an attack of the grip at Canaseraga, N. Y., by the use of Dr. Miles' Pain Pills.

Among the victims of the grip epidemic now so prevalent, F. Coyle is now recovering at Canton, Ohio, by the use of Dr. Miles' Nervine and Pills.

W. E. Nihells, of St. Louis, Mo., who was down with grip, is reported much improved. He used Dr. Miles' Nervine and Pills.

The frends of Mrs. L. Denison will be pleased to learn of her recovery from grip, at her home in Bay City, Mich., through the use of Dr. Miles' Nervine and Pills.

Everybody says that J. W. Udy is looking splendid since his recovery from the grip at his home in Des Moines, Iowa. They all know that Dr. Miles' Nervine was what cured him.

Prosecuting Attorney, Charles L. DeWaele, who has passed the three-score mile stone, had a time with the grip; but when seen at him home in Roscommon, Mich., the other day, he said Dr. Miles' Nervine was what cured him.

At nearly three score and ten Mrs. Galen Humphrey was fighting against odds when the grip attacked her; but she took Dr. Miles' Nervine, and now her neighbors in Wareham, Mass., remark on how well she is looking.

After an illness of five weeks from the grip, Mrs. Harriett Jackson is again about and looking fine. She began taking Dr. Miles' Nervine after the fourth week. Her home is in Bowling Green, Mo.

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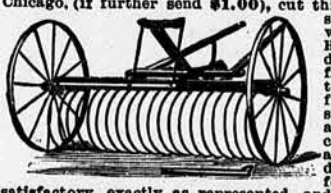

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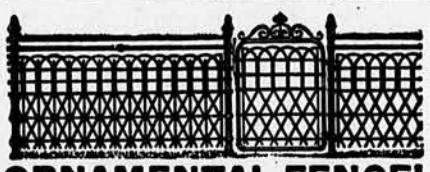

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OUR SPECIAL PRICE OF $7.95 for planter, or $9.95 complete with fertilizer attachment, exactly as illustrated, barely covers the cost to manufacture, with but our one small profit added, less than dealers can buy in carload lots. THIS IS ONE OF THE HIGHEST GRADE 1-HORSE CORN PLANTERS MADE. Contains every improvement, every good feature of every corn planter made, with the defects of none. Made by one of the best makers in this country from the very best of material. In simplicity, durability, perfect working it has no equal. It is especially adapted to hilly countries, where 2-horse planters cannot be used. Suitable for all kinds of land and under all conditions. Is complete in itself. Marks out and opens the furrow, drops the seed and covers it all with one operation. Strongly built, will stand rough handling, cannot get out of order. Built for us under contract; the best 1-horse corn planter made.

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"Grip robbed me of my sleep and I was nearly crazy with neuralgia and headache. Dr. Miles' Pain Pills and Nervine cured me."—Mrs. Pearl Bush, Holland, Mich.

of Central City, Iowa, is president, and J. McLein Smith, of Dayton, Ohio, secretary. To the membership of the club there was added, during the past year, 57 new members, making a total membership of 363.

Into almost every state of the Union the Red Polled cow has found her way, and readily wins the heart of him who tests her matchless worth; her fame grows great as her tribe increases; she is destined to become the reigning queen of bovine breeds, and I see in the dawn of this twentieth century, a bright future for the Red Polled breed. While some breeds have reached the zenith of their fame; the noontide sun is shedding his brilliant rays upon the Red Polls, in show-ring and sale; while other breeds are passing down the sunset slope of time, the Red Polled star of fame is only rising above the horizon of the cattle world.

Observations of Improved Stock Abroad.

O. O. WOLF, OTTAWA.

It was not until July 1, after a long, rough passage of fifteen days, that the Kemun found her way up the River Clyde to Glasgow.

While the passage had been tiresome and tedious enough throughout, especially to those that had embarked for the first time, everything seemed to take on a different condition as we neared our destination.

Crew and passengers seemed jubilant of the prospect of setting foot on land again, and gave vent to their emotions by indulging in song and athletic feats of various kinds. The boatswain seemed to be champion of the crew in these exercises, and it was with the feeling of a victor that he set the pace for those on board. He was a man of but moderate statue, was somewhat stooped; one that would not impress you as being above the ordinary in his physical development until you had placed yourself in contest against him. Then his strength seemed to grow. It was not, however, until America had put forth her best efforts that this brawny Scotchman was allowed to carry off the honors.

Along with this mirth and rejoicing should be placed similar expressions from the cattle with which the Kemun was loaded. Long before we sighted land the careful observer would notice the faint lowing and restlessness which seemed to possess them. Strange, indeed, isn't it, that these dumb animals should be so led by instinct as to be able to discern the nearness of land, even before man? To many this may seem like a far-fetched idea, but to one that has seen their manifestations of joy, I presume we may call it, it becomes a living reality. And well may they feel relieved, during which tons and tons of water was showered down over them as they were lashed from side to side, and oft times thrown off their feet. I shall never forget the look and expression that came over many of them as they seemed to give up, exhausted by the rolling of the boat, and the effects of a condition similar to the sickness in man, due perhaps to the absorption of the toxic principals of iodine and chlorine contained in the salt water and atmosphere.

A man seeing the cattle in this condition for the first time would be led to think it would be weeks before they would be again feeding in a normal way, but such is not the case. Only a few days is required for all ill affects to have passed away.

They received the best of treatment—better prehaps than the men that cared for them. The chief cattleman, or "boss," as he is called, sees to it that the cattle are cared for. But in spite of all that can be done for their comfort, I imagine that there creeps over them a feeling of monotony, the same as possesses man.

At first this broad expanse of water seems beautiful indeed, but after a time it becomes tiresome. This, though, only tends to prepare him the better to appreciate what awaits him on the other side, and gives him reasons to feel jubilant at its approach.

On July 1, the day we were to land, everything seemed to be going our way. The sun rose from beneath the eastern horizon in majestic beauty and gave us a "sunrise on the Atlantic" too grand to be described. On our right lay Ireland and on our left a little island just off the coast of Scottland. On and on we sped over the water, which was as smooth as glass, until finally we entered the river Clyde, the banks of which are noted the world around for the beauty of their scenery. It was under such conditions as these that we landed in Glasgow. As we steamed up to the docks one could very easily detect the expressions of anxiety creeping over the face of mother, father, young wife, brother, or sister, as they were awaiting the return of loved ones. The business men, too, carried muarks which distinguished him from the mere sightseer or loafer. He seemed deeply concerned in her cargo. All these things are interesting to observe, and are a source of pleasure to the one that knows he has friends in this mixed crowd. To many on board such thoughts as these only awakened a feeling of loneliness and helped them to realize for the first time what it means to be a foreigner. What it meant to be "in the land of our fathers, yet a stranger."

While these facts forced themselves on all that were making their first visit to Great Britain, yet it soon became apparent to the student of live stock that he need not look long for marks of the breeder's art. For as he walked up and down the streets of Glasgow, on either hand could be seen horses of great size and beauty, well adapted to the heavy work to which they were put. True, horses of many different breeds could be seen, but this was preëminently the home of the Clydesdale, the great draft horse of Scotland. Had we landed in England the English Shire or English cart horse would have been seen instead, while in France the Percheron would have been called on to draw these heavy loads. These powerful animals are everywhere to be seen in the three countries in which they are raised, performing all kinds of labor in the field and city, moving at a slow pace, the numerous heavy wagons by which merchandise is conveyed.

In the large cities, such as London, Liverpool, Glasgow, Edinbourgh, and Paris, where the largest and finest horses are in demand for the carts of brewers, the wagons of coal merchants, and other uses, the stranger sees with admiration the vast number of enormous carriages in endless motion through the crowded streets, drawn by teams of the largest horses in the world; and doubtless, there is something noble in the aspect of these huge creatures, yoked in lines, and obedient to the voice amidst all the tumult and noise of a great city, that makes a man give them respect even though he be a lover of some of the higher breeds that grace the boulevards of these cities.

The treatment these animals receive is none other than kindness, that which is calculated to give them confidence in man.

These old country horsemen are horsemen indeed. They seem to take great pride in the way tney keep their horses and harness. Perhaps part of this is due to the prizes offered by local societies in the parish for the best kept harness, the best groomed horse or team, the best pulling team, or the best job of plowing, or some similar work calculated to educate both the horse and his driver.

Such influences as these tend to make specialists out of the laboring classes of these Oriental countries, hence we find shepherds, herdsmen and horsemen among them of superior merit. Men that know how to feed properly, men well versed in the laws of heredity, men that know how to look after many of the common ailments to which their charge is subject, and last but not least, men that know how to show to advantage what is offered for sale.

One of the things that will impress the ordinary observer that has a chance to become acquainted with their methods of feeding will be the small allowance of grain that the young growing stock and breeding stuff received. Especially will this be true in cattle.

In many of the best herds the cows and calves receive no grain during the summer months, especially those intended for future use in the herd. The cows and calves which are run together in the same pasture are frequently shifted from one pasture to another, in order to keep the grass nice and fresh.

These pastures are provided with a convenience foreign to most Amreican pastures. That is a "rubbing post." It consists of a straight post set firmly in the ground. It is surprising to see how much use the cattle make of it. It seems to take the place of the currycomb, at least one would judge so were he to give it credit for the glossy coats which many of the cattle possess, particularly the north country cattle. It is altogether probable, however, that the climatical influences should be credited with the great wealth of hair for which they are famous.

The grasses most commonly found in the pasture are white clover and rye-grass, to which is frequently added red clover, timothy, and blue-grass.

In winter the breeding stock receive a ration of turnips and oat-straw. It is said that where they have an abundant supply of turnips no water is required.

The breeding bulls are usually kept stabled the year around, and fed on newly cut grass or some other crop grown especially for the purpose.

The stock that is being fitted for sale is usually kept up and given a bit of oil-cake, bran and ground oats, in addition to the above ration. These old country breeders bank largely on cake and use it quite freely.

The stables are well kept, stone structures, with cobble-stone floors, usually only one story high, with no mow-room in them, most of the feed being carried in from behind. To some this and many more of their methods might seem slow and expensive. At least it would to the average American who tries to see how much he can accomplish, rather than striving to see how good he can do it.

This trait of character which stands for quality rather than quantity has had much to do with the improvement that has been made in all kinds of live stock.

This must be the real aim of the man that is true to the breed he represents. Many a breeder can produce an animal of ordinary quality, but few there be that are of outstanding merit. Few that are capable of improving the breed. This fact calls for another quality with which old country breeders deserve to be credited, that is perseverance.

This is needed in all phases of life where anything is to be accomplished that is really helpful to man. That the breeder needs and must have constancy of purpose, must select a breed and stand by it for a series of years in order to accomplish anything for it, is an undisputed fact.

In this we believe is found the secret of many a man's success. It is this that enables a man to establish a type. It is this fixidity of type that makes a full-blooded animal of more value than a scrub of equal individual merit for breeding purposes; and, gentlemen, it is this that tends to make an imported sire of more value on our herd and studs than a home grown one.

They have been bred by father and son—men that possessed the same type for an ideal, generation after generation, until now, as a rule, where you find an animal of a certain type across the water you can count on his transmitting it to his progeny.

It is this very same principle of perseverance in one type and breed that has made Scotland famous for her Clydsdales, England for her Shires and France for her Percherons. And it is this idea that we would leave with you as a closing thought knowing we can only touch, in the time allotted us, a few of the many things that might be of interest in a meeting like this.

Sheep Feeding in Kansas; Actual Results for Five Years.

J. W. HIGGINS, JR., HOPE, KANS.

It is suggested by our Secretary that I read a paper upon Sheep Feeding in Kansas, "and give the result of some actual experience."

I am decidedly pleased to have the opportunity to address this assembly upon that subject (it must be in the form of an address, I have not found the time to prepare a paper). In looking upon this large assembly of representative farmers and stockmen of our great State I am led to remark that it has been my pleasure to go over a greater part of Kansas within the last few years, and found fine, well-improved farms, in abundance, well stocked with most all kinds of stock, cattle, hogs, horses, fowls, mules and

"My stomach was affected by grip and I could eat nothing but crackers and milk. I began taking Dr. Miles' Nervine and Pain Pills and the trouble disappeared."—Mrs. J. Lindsey, Montrose, Minn.

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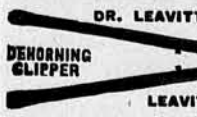

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goats; but to my surprise there were comparatively few sheep. I wondered why then; my wonder increases now. In 1889 I fed my first bunch of sheep in Kansas. Since then, up to date, I have probobly fattened and marketed over 100,000 head, and it is of my experience upon this work that I am expected to speak and wish to incidentally suggest that more of our farmers can feed a few sheep each year with a profit to themselves and a benefit to their State.

About the first question to consider is the kind of sheep to feed. I might go into breeds with suggestions, but I will confine myself to my subject and advise for a feeding sheep you secure a good mutton sheep and a good wool-bearing sheep,: that's the kind, do not make the mistake others have made of feeding or breeding for either wool or mutton alone.

You ask at what age a sheep will feed to best advantage. I answer from my standpoint, the yearling undoubtedly. Why. You have all, no doubt, seen the sheep market when lambs were selling at an advanced price over ordinary lamb prices, also you have seen the sheep market (meaning 2-year-old and over by the term "sheep") when it was unusually high—occasioned no doubt by an increased demand, or a scarcity of the one kind, or the combination.

If you were feeding a bunch of lambs and the sheep market was high, it would not probably effect the price of your lambs; likewise, if instead of lambs, you were feeding sheep, a high lamb market would not increase the price on your sheep. But it is well known that the packers use the yearling at times for lambs and in times of scarcity of lambs pay nearly lamb prices for yearlings; also if sheep are scarce and consequently high, it will influence the yearling market, as yearlings are always worth more than sheep, but conditions change and to any one who would feed a considerable number I would suggest a few of each —lambs, yearlings, and sheep would be the best proposition.

It is well now, perhaps, to take up the question of what the sheep will eat to advantage. This is where I am going to interest you and I hope set you to thinking. I make the statement that a sheep will eat more of the natural products of the farm in their natural state, and derive more benefit therefrom, than any other animal commonly seen upon the farm. Good shelled corn, oats, and prairie hay will fatten a sheep; he will also eat your straw, millet, cane, Kaffir-corn, sheaf-oats, and alfalfa, and in the spring you can move him around on your rye, oat stubble, millet stubble, cane stubble, into your corn fields and into Kaffir-corn fields that are planted (if you are agoing to top your grain), as he will reach up for the leaves but can not get the grain and will not break the stalk down. If you have a bunch of cattle on feed and are not situated to grind your corn you find it necessary to buy a bunch of hogs to run after them. This is an added expenditure, to say the least, and often when stock hogs are high causes the farmer to sell his cattle and grain, letting some one else get the profit. And very few of our farmers consider it profitable to feed their hogs out alone, but the sheep requires nothing to follow it to pick up what it wastes. I will add though that with the sheep, the same as with cattle, probably the best results are obtained by grinding the feed, and the man who caters to the appetite of his flock, giving it the most variety, will fatten his sheep the quickest and best.

The manner of feeding is worthy of notice.

(A member here asked: "How soon do you get your sheep on full feed?)

I was intending to take that up later, but as well now as any time. Speaking in the sense of the customary meaning of "full feed" I answer "never." I am acquainted with several well known sheep feeders, who do get their sheep on "full feed," who are letting them have access to feed at all times and as much as they could eat. I do not make a practice of this method because to get the best results the sheep's stomach should not be overloaded. I have been in feed lots and found a hand full of soaked corn dotted here and there on the ground showing to me that the sheep was receiving more grain than his stomach could retain at one time.

It is well known that a sheep does not, when taking his his ration, chew his grain, but swallows it whole and brings it up at his leisure to chew. Now shelled corn will swell, and an over-supply at one time in a sheep's stomach, by swelling, will cause distress and the sheep will try to disgorge the whole dinner; succeeding, he deposits it upon the ground (as I have before mentioned as seeing scattered about); failing, he dies—neither result being satisfactory or beneficial to the sheep or owner.

I claim I can have my sheep on full feed just as surely and completely by feeding them three times per day as by any method and by watching each feed carefully I can detect a failing or comming appetite and feed accordingly. I have often changed quantities three times per day. Essential points are to feed regular, measure accurately, and know how much you feed, keep your feed boxes scrupulously clean, and give variety—shelled corn, for breakfast at 6:30, oats and corn-meal for dinner at 12, and say oil-meal, bran and corn-meal at 5:30 p. m. Feed hay or roughness once per day, preferably mornings, after breakfast, in quantities that they will clean up and get all they crave, watching for a coming or going appetite in this too, for just enough roughness is just right; too much takes away the appetite for the more important feeds of grain following. Keep water and salt before them all the time. Speaking of feed, I will mention some of my experience regarding quantity, and as my experience has been on western and range sheep my remarks must of a necessity refer to that class of sheep. It is well upon first putting your sheep up to feed to start on principally roughness, to accustom their stomachs to plenty. A good plan is to feed Kaffir-corn with grain on, or sheaf oats, to start with—say for a week. Then commence on one-half pound of grain per day per head, and what roughness they will clean up; from this you can go on constantly and gradually increasing your grain ration until you are feeding from 1⅝ to 1⅞ pounds per head per day, and 3 pounds hay or roughness; as you progress in feeding commence to mix your grains until the farther you get along the more varieties form you feed, you will find by so doing you are constantly whetting up your sheeps' appetites. As you advance on feed of grain commence to pradually diminish your hay ration, but be careful to give enough each day to assist nature in digestion and keep the sheep from looking drawn. It will require from ninety to one hundred and thirty days to fatten a sheep, and he will have eaten approximately form 2¼ to 2½ bushels of grain and 300 to 350 pounds roughness, acocrding to the sheep, his condition, when put in, and how successfully you get along, and the weather. Ordinarily, for this time and amount of feed he will have made a gain in weight of from 18 to 22 pounds. I have, of course, heard of much larger gains being made in weight, but I do not propose here to treat upon phenomenal results, or to give any misleading ideas.

The chief remaining topic upon this subject is, I believe, the diseases or ailments of the sheep. Here is where I also push the sheep to the front.

We sat here yesterday and heard a very learned gentleman expound upon the virtues of the vaccine in connec-

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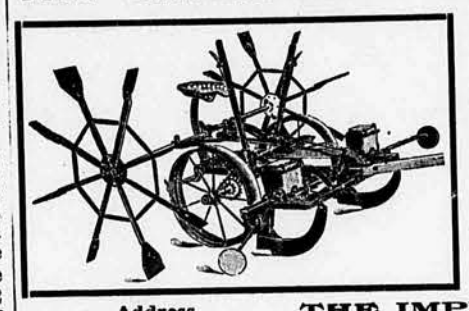

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tion with the disease "blackleg" in cattle, and if I understood correctly, the vaccine is a preventative merely, no cure being known; the disease is fatal. We also heard our agricultural college professors state that their herd of cows were disposed of on account of the tuberculosis. We know that the glanders are fatal to the horse, and they are subject to many other diseases. The hog cholera is epidemic and fatal. One of my neighbors lost his entire herd of registered hogs twice in eight years. Can any one here tell me of any disease or ailment that is epidemic and fatal to sheep? I don't know of one. Don't that set you to thinking? A common ailment the sheep is afflicted with in the West is the "scab." This, you know, is a parasite or insect that burrows just beneath the skin and deposits its eggs. This causes an irritation, and the sheep scratches or bites the afflicted parts—often, if unattended to—making a raw sore which, owing to the healing power of mutton, soon scabs over, forming a hard crust under which the insect thrives. This is the extreme case. If attended to it gets no further than a slight indication of scratching on the surface of the wool. I have never lost a sheep from the scab and there is certain and absolute cures for it. The scab has been looked upon with fear. A man refused to buy some sheep from me because I was a feeder of western sheep, which were commonly supposed to be constantly afflicted with the scab, claiming he would carry it to his farm and would ever after have it there. It is contagious, but I will show you how much it is to be feared. Though I suppose as fine a lot of sheep as has been brought into the state of late years. All imported registered Lincolns. Would I likely be careless of their wellfare? I'll tell you where I put them, right in those terribly infected pens. Yes, and they have been there three years and never dipped or shown scab. But that is not my strongest point, for I say scab must be contagious and my registered sheep may get it yet the strong point is the ease with which it can be cured. There are many sheep dips prepared and sold on the market. It is your privilege to use these if you desire, but I will give you a simple formula that is a positive cure for scab. The ingredients are common flour sulphur, common every day water, and unslaked lime. The proportions are ⅓ pound of lime, 1 pound sulphur and 1 gallon water. The formula for preparation is: Have your water at boiling point, add your sulphur, keeping your water boiling and your sulphur constantly stirring to keep from burning, add your lime, and cook until all is dissolved and you have a dark brown liquid resembling good strong coffee. This is the body of the dip. For use dilute this by adding two parts water, and when using keep the dip at a temperature of from 95° to 105°, immersing your sheep and keeping them in at least two minutes. It is needless to add that thoroughness is necessary to produce good results.

I believe my remarks now cover about all I can volunteer. Thanking you for your kind attention, I again assure you it has given me pleasure to speak in behalf of our mortgage-raising friend, the sheep.

Forage Crops for Live Stock.

JNO. M. FITCH, LAWRENCE.

The subject assigned me is one whose importance I fully realize, as well as my inability to do it justice at all, much less in so limited a space. If I succeed in arousing increased interest in the matter of forage plants and the part they play in the successful raising of stock of all kinds, I shall feel that I have accomplished something to be proud of at least. I shall not attempt to wander into the realm of plant analysis, or fire a lot of experimental statistics at your heads, telling the amount of each particular chemical element for good or evil that each member of the long list of varieties possesses, but simply state a few facts I have gathered in my trips over the state in regard to the favor or disfavor with which the different kinds of forage, both new and old, are regarded. During a residence of over twenty years in Kansas I have seen many changes, and I am glad to say for the better in the line of forage plants, as well as in the improvements of live stock. In fact the former has kept thoroughly abreast of the latter, and stock growers and breeders are learning each year the advantages of care in the selection and trial of varieties to determine their values as producers of flesh, of bone, of sinew, or of fat, as the case may be, or the building up the constitution of parent and offspring—their powers of endurance and strength (if beasts of burden), quality of flesh (if of the class used for human food), and improving each kind of the animal kingdom that man claims for his use the individual characteristics that go to form a higher type of excellence. The food stock eat must contain certain elements for such development, and this being so, the wise breeder and grower sets himself to work to learn what sort of grain or forage is most satisfactory in that it will give the best and most direct results at a minimum cost of production. There is great diversity of opinion on this subject of forage plants, and discussion is constantly going on among the farmers as to the kinds that are best for feed in a general way, the methods of growing and caring for, feeding to stock, etc. Twenty years ago Hungarian millet was largely grown in the West; then came the common, and later the improved German millet, the hog or broomcorn millet, and then the Golden, and now within the last few years a new sort, the Siberian, has been introduced with many and varied claims for superexcellent, and really I believe it is destined to become extensively grown. It possesses many excellent qualities to recommend it to favor in the way of earliness, yield and nutritious elements, and stock of all kinds eat it readily and with a minimum waste as compared with the old standards. I have personally read many letters from parties who have grown it in Kansas, Nebraska, Missouri, and other states, besides having had the personally expressed opinions from many others, and each has spoken most favorably of the Siberian millet and announced his intention to sow it again more largely the ensuing season. It is certainly worthy of careful trial on the farm or ranch till its merits are fully understood and appreciated. It is interesting to note the fluctuations of area of planting of different sorts of forages each year and to speculate on the causes that induce a majority of farmers to plant one season millet almost uniformly, at another sorghum, at another Kaffir-corn, etc. Naturally one would suppose such things would be regulated or influenced by the season, the price of seeds or hay or the desire to rotate crops for purposes of fertilization; so one can not look at either fact as proof that either is the best forage. Certain it is, however, that the saccharine and non-saccharine sorghums are gradually displacing the millets, as they in time will no doubt be superseded by some other more profitable and popular plant in their turn. At present, however, the sorghums are for many reasons in the ascendency in public favor. The Kaffir-corns particularly are more generally grown than ever; the additional item of the seed, as well as the stalk or blade, rendering it a more profitable one to grow. The reports of agricultural experiment stations, our own as well as others, are all favorable to its culture, and the various ways in which the seed of the white Kaffir-corn as an element of food for both man and beast give it an additional value. Its abundant yield of forage, ease of culture, drought-resisting qualities are strong points in its favor and are duly considered, as witness the increased acreage over the past years of both the white and red varieties—the latter, however, taking precedent on account, it is claimed, of more abundant yield of seed. Of the value of alfalfa for all kinds of stock I leave others, far more competent and experienced, to speak, and only add that the labors of the western seed houses, the Kansas Experiment Station, and the KANSAS FARMER management to introduce and encourage the growth of it in our state and others are being amply rewarded, and the "field of living green" that diversify and relieve the ruddy brown of our western prairies are meeting the eye in greater numbers, and in localitites whose soils a few years since were considered not adapted to its successful culture. Its permanency is an extra inducement added to the already large number of claims it possesses.

The awnless or Hungarian brome grass is the latest candidate for our consideration, and though it has been catalogued for several years, has had, like its predecessors, to bide its time and waite the slow process that all really meritorious things are compelled to submit to before acceptance by the world at large. This grass, like most others, is of European origin, and has many points of superiority to recom-

(Continued on page 113.)

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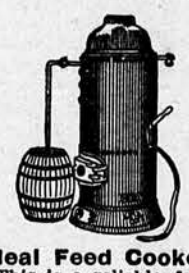

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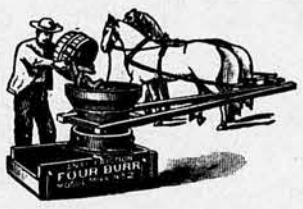

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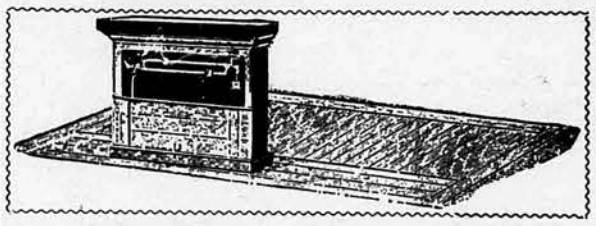

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PUBLIC SALE!
56--Registered Galloway Cattle--56
At Kansas City Stock Yards New Sale Pavilion, Thursday, February 14, 1901.

The offering will consist of the entire herd of **S. M. Winslow, Oskaloosa, Mo**, headed by the prize-winning herd bull, Basanio 6441. In this division there will be 20 Crusader cows; all extra good ones. Phil Grace, of Rose Hill, Iowa, will offer 8 bulls, the choice of his last year's crop, and H. H. Harris Jr., Marshall, Mo., 3 bulls, sired by the champion bull, King Hensol. Sale will begin at 10 o'clock a. m.

FOR CATALOGUES, ADDRESS.... *FRANK B. HEARNE, Manager, Independence, Mo.*

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60 Shorthorns 120 Herefords
AT THE KANSAS CITY STOCK YARDS NEW SALE PAVILION,
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Wednesday, February 6,
F. W. and O. B. CAIN, of Novinger, Mo.,
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SHORTHORNS.
Straight Bates, Cruickshanks, and Cruickshank-topped.

Thursday, February 7,
STEELE BROS., Belvoir, Kans., and E. A. EAGLE & SON, Rosemont, Kans.,
WILL SELL 60 HEAD OF RICHLY BRED REGISTERED
HEREFORDS.
Thirty Bulls and Thirty Females.

Friday, February 8,
MILLER & BALCH, Kirksville, Mo., and E. CORKINS, Bethany, Mo.,
WILL SELL 60
HEREFORDS.
Eleven Bulls, and 49 Cows and Heifers.

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mend it to our notice and for trial. Its ability to resist drought is one of its strong points that will appeal to the Kansas farmer and stockman. It is known as Bromus inermis, and judging from the reports of those who have given it a trial, its value as a forage plant in all requirements and its adaptability to our soils and climate has sufficiently established the fact that little if any risk will be undergone in planting it freely. The tendency to cling to old varieties and the exceeding reluctance on part of most farmers to try new novelties, and if they do try them to pay but little attention to directions given for their culture, and thereby frequently encouraging failure, is often to blame for the tardy recognition of the importance and value of many improvements in all lines. Stock breeders no doubt realize this fact in many ways. It took about six years or ten years to get alfalfa started as a crop of any magnitude in Kansas. About the same can be said of the sorghums, Kaffir-corns, etc. Those who were foremost in the procession and had faith enough in the sort they were to try realized many times the cost of their experiment in supplying seed to the less enthusiastic neighbor, and so it is likely to rove in the case of Hungrarian brome grass. Better join the procession now and be among the progressive parties. Like the alfalfa, it is a permanent grass, and fully as highly recommended. Many large farmers are already planting it extensively.

Another plant of the leguminous order of palnts, the soy- or soja-bean, has been for some time attracting the attention and interest of stockmen and farmers. This variety grows in favor as it becomes more generally known, and is one of the later introductions that is evidently to become a permanent member of the stock forage family. Abundant in yield, rich in nutritive qualities, eagerly devoured by stock, beneficial to soils, it has proven itself worthy of adoption by the up-to-date stockman. Ground and fed mixed with ground Kaffir-corn, it is claimed it will increase the flesh-producing properties of each, above either fed separately.

And now, one more item. Last, but not by any means least, is the root crop, notably the stock beet. I doubt if there is any crop whose value is so well konwn or the knowledge of which has been so widely disseminated by every agricultural publication in the United States that is receiving, in our part of the country at least, so little attention. A few farmers only, who appreciate the worth of the beet as a fall and winter or early spring feed for cattle ,annually devote a small portion of ground to the growing of a ton or more of beets, mostly of the large red mangold wurtezell. No food is more relished by the stock or is more beneficial or contributes more to the health of the animal to which it is fed than this. For milk cows they are invaluable. Turnips, carrots and some other root crops are also profitable to raise for food for stock, but beets come the first in the list. They are of the easiest culture, and nothing I know of will yield as proportionately large returns.

May I hope that these few suggestions bear fruit, and the next convention be an experience meeting of trials and results of at least some of the varieties herewith given.

I will add in this connection that F. Barteldes & Co., of Lawrence, Kans., have issued a recent circular on the history, description and culture of Hungarian Brome grass and will supply them, as well as all information in request to anything in the way of forage plants or seeds, on application.

General Discussion on Sheep.

Member: In regard to farmers raising sheep for mutton and wool, I would like to ask Mr. Higgins if he shears the sheep he breeds for mutton, or just fattens them.

Mr. Higgins: I said in my remarks that the statements I made must be on the basis of feed-lot sheep. I have a breed of mutton sheep that I sometimes shear.

Member: I would like to know some more in regard to dipping. I agree with the paper on Sheep Breeding in Kansas about giving sulphur, but are there not a great many ways of giving the sulphur for the dip? In your remedy is there not a sediment that remains in the dip, consisting mostly of sulphur?

Answer: If a man dissolves his sulphur properly and uses sufficient lime, and takes the proper care in making it, there would be no danger of a sediment in it. As to other kinds of dip, I do not deny that there may be other kinds of dip than the one I have prescribed.

A gentleman ,not a member ,said: I am not a member of this association, but I would like to say a word ,as I came from a sheep country. I came from Ohio where they raise sheep, and I want to endorse a good many things which this gentleman has said here. I will say that you will find the dip recommended good for a great many diseases, such as scab, for which it is a sure cure. There is one thing I want to say in reference to the gentleman's first remark. In the first place you can have but one primary object in breeding any kind of animal. If you are breeding for wool you must look for wool. You may attain first class wool sheep and first class mutton sheep. He asked why we do not have more sheep here. In Kansas we can raise cattle better than we can raise sheep.

Mr. Kirkpatrick: I want to say that no matter what the experience of our friend from Ohio, or the gentleman who first spoke on this subject, if there is an animal in the world that can be called a dual-purpose animal it is the sheep. I think their theories about breeding one specimen for wool and another for mutton are entirely eroneous. It is possible to produce the very finest wool and the very finest mutton, all out of the same sheep.

Mr. Robison: There is another illustration in his remarks that covers the whole live stock interests. He seems to thing there is no need of more than one purpose breed animal. My experience is that there is no species of stock that is not good for more than one purpose. The best sheep in the world have been both mutton and wool sheep ,and they h ve been produced in almost perfect specimens. Take the Southdowns, and all the downs, and they have both wool and mutton, and the mutton is superior to any of the woolless sheep mutton .

Mr Melville: I suggested to a man once, and probably that suggestion will fit the average man ,that the average stock raised in Kansas has been interested in hogs so long tnat he can not understand the nature of a sheep. But I have been more or less mixed up in the different breeds, and probably my experience may be of some benefit to some of you. Now I started in with a flock of Cotswolds, but soon concluded that they were not the right kind of sheep for this climate. Of course I do not mean to say that every one else has come to the same conclusion. I decided that the Shropshire sheep was the best for this country. I secured a Delaine-Merino for my cross. My next cross was with a Southdown. In my experience with the Southdown and Cotswold I did not get a good combination of wool and mutton, but found that the Southdown produced the finest wool. In 1883 I used the Shropshire sires exclusively ,and I have succeeded in producing an ideal wool and mutton sheep, and, others to the contrary notwithstanding, that class of sheep can be and is produced. It is my opinion that sheep ought to be combined in this way, so that in case of a failure of wool you will at least have the mutton, which will pay you for the expense of running your sheep through. Some of my most successful years with sheep were the years wherein the men who only had one idea of the sheep, that is that you must breed for wool and mutton separately, were trying to get rid of their flocks, selling to any one who would buy them. My average expense was $2 a year for keeping my sheep. The lowest return I have ver received on my flock straight through was 15 per cent above the cost, that is, 15 per cent on the investment; and my highest return was 55 per cent on my money.

I have never sold my wool in this country since I have been in the business. I have always shipped it to St. Louis because the prices there are better than they are in Kansas.

Speaking of dips, I have used two different kinds of dips. The one I use most of the time is the Cooper dip. It gives satisfaction most of the time, and I think it is superior to most others. But the thing that is required of dip is that it accomplished the purpose it is intended to accomplish. I do not think it makes any difference what it is composed of, if it does the work, I think when a dip is effectual, six months after its use you can not tell wnat has been used. If the dip will do what it is intended to do I do not worry about what it will do six months afterwards. I do not think there is a disease among sheep to-day but what if a man will take the proper care of the sheep he can not overcome and can make a success of the sheep business. As for me I could not farm without having sheep. I would not know how to get along without them. I believe they are a benefit to a farm, and that where they are allowed to run there will be more grass and better grass, and that the farmer will not even notice the small cost of keeping them.

Mr. Westbrook: Of all the industries we have talked about this has been the only sheep discussion. I do not think you ought to choke us off, but we ought to have more time in which to talk about sheep. I think the sheep idustry is one which the people do not understand. I believe it is because the people are not given a chance to find out about the sheep. In all the discussions of live stock when it comes to the sheep question somehow there is never any time to discuss it. I would like to know why it is we do not have more sheep in Kansas. I think we ought to be allowed to talk longer on this subject. I am willing to sit down and be quiet if it is not proper to stand here and talk on this sheep question. Sheep are all right. Some people object to them because they are lousy—because they have parasites on them. There may be some one lousy in this room, who has parasites on his head. That don't hurt him. Are you going to throw him out for that. Is that any reason why he should not live in the state of Kansas? If a man is lousy he says he is in good health. If a sheep is lousy why can't it be in good health too?

The President: This may be an important question, but the time is limited.

Mr. Westbrook: Limit it on the hogs we have talked all the session about. People talk about lice. Look at the dirty hog. You can see the parasites shootin' around on his back a mile away. These lice are all right on the sheep. They are not a disease. They do not hurt them. Another thing. A whole lot of people find fault with my sheep because their horses are afraid of them. They pretend to be good stock raisers. As I said before, all like wool and all like mutton. Because a sheep has a louse on it they call it a disease, and want it ousted out of the state. Sheep are good animals to clean up farms. My sheep can not climb trees and pick locks and do that kind of thing, but they are good sheep.

The President: I do not want to shut you off, but—

Westbrook: I just want to say that hog paper?

The President: No, sir.

Mr. Howey: I just want to say that I have a good many more sheep than Mr. Westbrook, and they are better. I have Shropshires, and he keeps the small Merino.

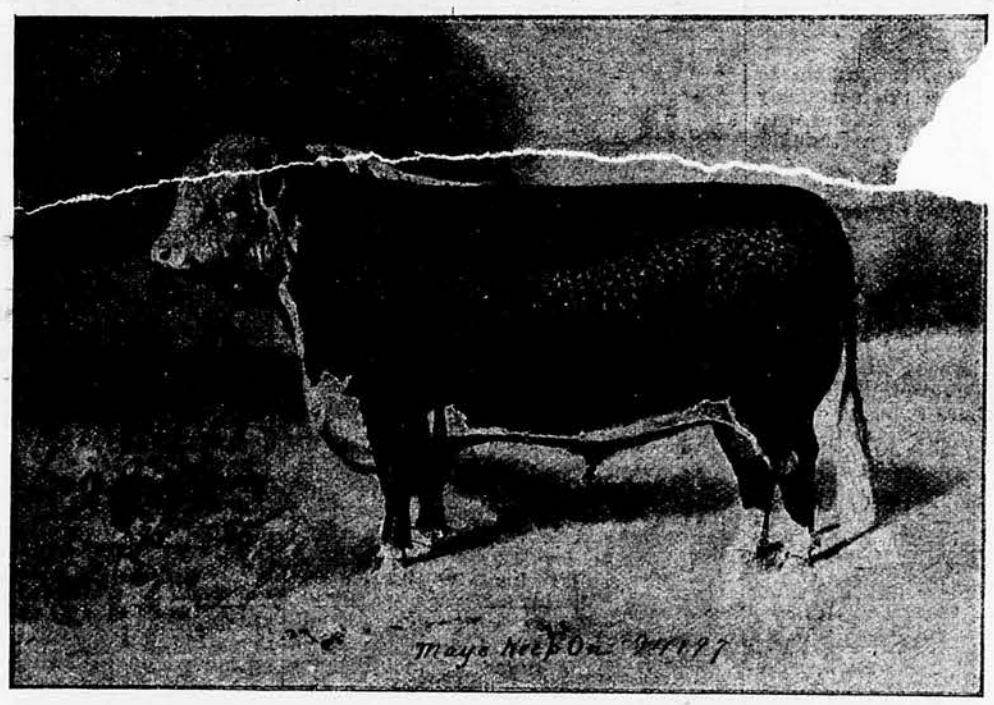
Westbrook: I just awnt to say that this fellow is built that way. He likes Shropshires and I like Merinos, that is the difference. My sheep are as good as anybody's. I want the kick in favor of sheep made large enough that next year the program will be made out so as to give the poor sheep a chance in the discussion.

Mr. Chandler: In the first place I think there is a good deal of c[illegible] influence in the raising of sh[illegible] can not raise sheep here like the people in Pennsylvania and Ohio. Our atmosphere here is not good enough. This is not a sheep country, as are some of the eastern states ,like Vermont. Wool does not net as good a price on the market.

Mr. Westbrook: I think part of his remarks are just exactly right. We do not get a good price here for our wool. I have raised sheep in this country for twenty-seven years, and I have had them that would average 44 pounds of wool at one growth. The reason we get such poor prices for our wool is because we are neglectful with our wool, and get dust and dirt and mud mixed with it. But I think our climate is just as good for sheep raising as the country he speaks of. A man can raise more corn with 25 sheep on 160 acres of land than he can raise without them.

Mr. Ransom: Five years ago I shipped my wool to an eastern buyer and he wrote me back that my wool was better than the Illinois or Pennsylvania wool. But he said that there was more dirt in it, and that consequently he could not pay me the price clean wool would bring. The Kansas flocks that are well cared for will produce wool that will sell right along with the wool of the eastern flocks.

Mr. Chandler: I still think there is a climatic influence in this country that prevents the production of as good wool as can be produced in the eastern states. There is only one country in the world that can produce as good sheep as Pennsylvania and some other New England states, and that is Australia. I think there is a feature or



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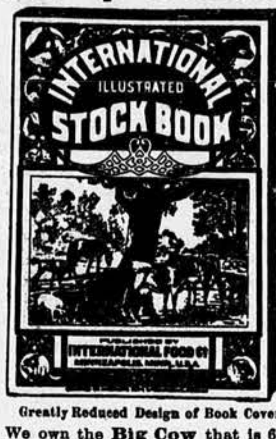

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condition about this thing that you do not consider. The reason the Australians can raise better sheep than we can is that they have a more equal temperature. There is something about the evenness of the climate that conduces to the production of perfect sheep, and consequently perfect wool. I say that this condition does not prevail in this country. It is too cold and too hot. To prove my assertion compare the wool producing capacity of Australia with this country.

Personal Observations of Kansas Breeding Establishments.

THEO. W. MORSE.

My brief experience among the fine stock herds of this and adjoining states —which your secretary erroneously concludes has fitted me for handling the subject assigned—has been one of great pleasure and interest. It has added to my practical knowledge of hogs and cattle, gained by being brought up with a slop bucket in one hand and feed measure in the other and the fragrance of the barnyard in my hair as no other experience could. Yet I fear I can give out but little of the good received. I can merely mention some of the places which have interested me in the hope that others may be induced to see them and enjoy as I have.

I could not, if I would, point out among the many great herds, the one in which the cattle are mostly beefy, or tell you whose hogs are bred most ... the "purple." Many excel- ... in the state it has not yet ... llege to see, and the few ... will be merely those ... mind as being illus- ... or characteristic of ... k the indulgence of ... es, I presume to ... s the case may ... servations with ... have thought ... how ... this thought—not ... me by any means, but really always in my mind—that Kansas is equal in the quality and breeding of her fine stock to any state in the Union. It is not a lack of patriotism that prevents my going farther and asserting (as we will be justified in doing a few years hence) that Kansas beats them all. We are in the position of the preacher, who, on being taken to task for the rather moderate statement he made of the horrors of hades, explained that he had some very dear friends in Missouri. We, also, as breeders of fine stock, have friends in Missouri. Although Missouri breeders are in a sense our rivals and will be in the show yards of the future, our only worthy rivals, they are also our allies. To them we must look for the coöperation that shall bring to the West the recognition by our own record associations as well as by the other fellows' railroads, which the importance of this section merits. We ought to have a fellow feeling for Missouri, for we have both been dragging along without state fairs, compelled to meet the breeders of other states on their own "gridirons" in the presence of their own "rooters," or stay at home and sell at 25 per cent below their prices while we pay big money for dilute solutions of their prize winning blood.

But to return to Kansas and my observations. Some of us have been out to Dover—the hardest place in the state to reach and the nicest place in the world to stay when you get there. I think they tell this sory on a man from New Mexico who drove out from Topeka one morning to look at some bulls. Well, he made the trip, and that evening at Dover, after a supper that had made him good for about $10 more a head on a bull trade than when he arrived, he started to hitch up his team with the remark that he would just "drive on down home and look after the chores before it got dark." Of course, all travelers to Dover go to see the Elder Lawn herd of Tomson & Sons, the herd that ran the Kansas banner up to the highest notch it reached at last fall's Kansas City show. The achievement was merely a beginning for Messrs. Tomson, yet it should be an example and an inspiration to every breeder in the state.

When you go to Tomsons' you will not get away without seeing the herds of Babst, Pringle, and Kingsley—and every one of them will be found to be worth the trip. Two things in particular you will notice. One is that the breeders around Dover know the value of coöperation, and are neighbors indeed. The other—if you go in mid-summer, as I did—will be that the breeders possess the finest hill pastures of bluestem imaginable, with cattle of all ages in perfect condition on it alone. If there is a man in Kansas who doubts the value of pririe pasture in summer, he ought to go to Dover next July.

The sight might not drive a blue grass man to plow up his sod—no, not if he had been up to Sabetha and seen John McCoy's mossy-coated red cows, each one carrying a full width sofa stuffed with blue grass on her back—but he would take better care of his prairie pasture if he had any. We all know one breeder up in that country who appreciates both kinds and has them mixed. Notwithstanding the fact that he raises 5,000 or 10,000 bushels of potatoes every year, he is a good cattle man and claims the distinction of having the largest herd of Shorthorns in the state. Bound to be at the head in every particular, this gentleman sat up all night one time selecting a romantic name for his herd. You have seen the result in his advertisements—the Bill Brook Herd. When we all go up in March to see his first annual draft sale we will find Bill Creek, and another with a name as picturesque, running for some miles through Mr. Tudor's rich farm, fed all the way along by springs which a man in southeast Kansas, where the wells flow nothing but gas and coal oil, would give his immortal soul to own. But do not let me convey the impression that the gassy corner of the state can't raise cattle. In Nebraska the other day I saw an old time Scotch breeder, whose sons were about to buy another red bull, wish, with tears in his eyes, he could see a roan herd again. It would do his heart good, as it would many another lover of the old fashioned and again popular kind, to see the herd all Kansas should be proud of down at our own town of Mound City. Mr. Kellerman, who owns the herd, is no color man, and the reds that are good as the roans, and plenty of them are, are welcome when they come.

I seem to have gotten started off on my Shorthorn foot some way and am not able to make a change. Let me speak of one more place. Down in the oil region (where they say, by the way, that the oil output hardly exceeds the output of the "Helpful Hen") is the Sycamore Springs Herd. In beef production, Mr. Hill, the owner, has got three chances—and they seem to be all sure things—prairie-grass, blue-grass, and alfalfa. A university training and a lawyer's diploma couldn't overshadow in Mr. Hill the instincts of a stockman, and visitors a few years ago when he was handling Hereford cattle, Yorkshire hogs, and two or three kinds of horses, used to think they had struck a county fair as they drove down into the cañon that shelters his barnyeards.

There is a herd near Mr. Hill's, owned by one of our ablest members, where I saw something I want to mention, viz: the finest kind of fall pasture, consisting of a mixture of alfalfa, English blue-grass, red clover, and orchard-grass. Mr. Hanna says he has had not a particle of trouble from bloat on this pasture.

I am not half way round yet. I wanted to go to Dickinson County. They have a herd of thoroughbred stock at every cross roads. A farmer there ... bull out there isn't that uses a grade ... me. Up the allowed to vote, they tell ... a firm Republican Valley a litle way is ... (Gifford Brothers) that is teaching a good lesson by their success in building up a strong local trade through the medium of public sales. All things considered I believe there was no more successful sale held last year than the one they made at Manhattan in April. Our friends of the Rocky Hill Herd are following that example, and it is to the interest of every one of us to see that neither they nor any others be allowed to suffer for putting their faith in the patronage of their own state.

In the matter of sales and show herds and the exploiting of their stock generally, Kansas breeders of the new era have hardly begun. Sunnyslope—the pride of Emporia, of our state, and of the whole cattle-breeding fraternity—is our leading example of a herd possessed of a modern "hustle." Mr. Stannard's admirable management of that great breeding establishment must be witnessed and studied to be appreciated. Some years ago I had—in common with others, no doubt—an idea that the methods and expenses of this great farm were such as would not be practicable ordinarily. But a glance at the orderly, well arranged barns; the perfect utilization of feed and bedding and shelter, and the well kept pastures and fields must convince any one that the best kind of economy—an active, business-like economy—is being practiced there. Sometimes I think the Hereford breeders learn from their association to be business-like. I want to digress long enough to speak a word of praise for the Hereford Record Association. The influence of its good work can be recognized in every "whiteface" herd in the state. Up in the Blue River Valley there is quite a Hereford settlement. Some of us have received handsome calendars sent out by one of the firms. Its summer ranch is a few hundred acres of Marshall County hills with a wire fence around it. In the center, when I first saw it, stood the proprietor's one-roomed cabin and a two-roomed stable for his bulls. Not very pretentious, maybe, but the real things, big Hereford cows, each one with a calf, were scattered all over the prairie. The bull barn and cabin have since become a part of a village of buildings—which is yet but the beginning of a breeding establishment that will some day make a name for the Cotterell Brothers.

Over near Gov. Glick's famous Shannon Hill Farm (upon which I would try my eloquence if he occupied it still) is a wise man of Scandinavian extraction. He raises Herefords, and some of them he owns in partnership with one of the best breeders in Missouri. I am told that when the Missouri man wants something better than can be found on his own place he comes over to Larson's to get it. Missouri has come to Kansas a great deal in her time. Just as her Shorthorn men came to Linwood and to the men who bought of Linwood, so her Hereford men came longer ago to the Hawes ranch at Colony, and the Fowler ranch at Maple Hill, and the best pedigrees in the herds of a half dozen states trace to Kansas cattle. A lot of this old time blood is collected in a Kansas herd, that of the Steele Brothers at Belvoir. Belvoir is about as favorably situated, geographically, as Dover. I hope Mr. Babst and W. E. Winner will soon complete their Belvoir, Denton & Dover electric line up the Wakarusa and down Mission Creek. If necessary the entire membership of the Kansas Improved Stock Breeders' Association should be called out to help capture the Empress Dowager, or whoever it is opposing them.

I seem about to leave the hog men as the meeting was about to leave them yesterday—at the mercy of the express companies—or whoever was about. I'd like to speak of one more place before I change, but unfortunately I never saw it—the great cattle ranch of Frank Rockefeller, at Belvidere. The press has told us a little about it; those who have noticed for the past year or two how Mr. Rockefeller seems to absorb all the best stock in the big Hereford sales have some idea as to the immensity of the place. A full description, however, is still due us from some stockman who has seen and can appreciate the place.

As for hogs—every neighborhood in this half of the state has a good herd of Poland-Chinas, Duroc-Jerseys, or Berkshires. The illusion that still keeps some from investing in pure bred stock does not operate in swine husbandry. A man with half an eye can see that a pedigree is no hinderance to a hog, and the most diffident of farmers will give his herd boar a name containing five words and a number without the slightest hesitation. The spirit is a good one to keep alive, and if Kansas, or Kansas City, ever has another big hog show there will be more champions springing up from unexpected quarters than Iowa or Illinois ever dreamed of. Not only does the world's fair herd at Wichita go loaded for a world's fair all the time, and John Bollin, at Kickapoo, every year raise show stuff by the car load, but men whose names are never seen in print outside their own county are raising world beaters on the quiet. Up at the Nebraska state fair the past year, where Des Moines winners were turned down without ceremony, every hog that went from Kansas brought away a ribbon.

Health for 10c. Cascarets make the bowels and kidneys act naturally, destroy microbes, cure headache, biliousness, and constipation. All druggists.

Good Roads for Good Stock and Good Farms.

JNO. K. WRIGHT, JUNCTION CITY, PRESIDENT KANSAS GOOD ROADS ASSOCIATION.

Your worthy secretary has somewhat imposed upon you. In a conversation I had with him a short time ago, I incidentially mentioned that I was out of politics and not particularly in the fine stock business, but was interested in having good roads in Kansas. He then remarked that he would put me down for a paper to be read before the members of this association. Without any promise on my part, I was sent a program for a paper on "Good Roads for Good Stock and Good Farmers."

I want it distinctly understood that if we have good roads for them, that the scrub stock and the poor farmers can use the same and will probably enjoy the benefits, equally with their blue-blooded neighbor.

Has it ever occurred to you that communities have voted a tax upon themselves to build railroads to convey their grain to distant markets, when the dealer could get it to the seaboard at less cost than he could get it from their farm to his market town?

They are also ready to sign a petitions to congress to expend thousands of dollars to improve some water course, that is not of as much interest to them as it would be to have one hill cut down or one culvert built or an insignificant ditch dug or one mud hole filled up getween their farms and their market town. And the same men when warned out to work their road tax would put in their eight hours with their teams, for which they are allowed $3 per day, seeing how little they could do to get their tax receipts marked paid.

How many road supervisors have we in the state, who spend the money levied for road tax in warning out the citizens to work their poll tax, working one or two teams or two or three men at a time, so that they can get all the money that is paid in cash, for their services as "road boss?"

How many of you have watched the gang of teams working out tax assessed against railroads, when they put in twelve hours for each team in one day, getting credit for a day and a half without raising a sweat upon either man or beast in the hottest weather, and leaving the road in worse shape than when they commenced, but always getting their receipts in full from the "road boss?" That is why railroads can get their tax worked out at about 50 cents on the dollar.

Why is it that it is often the case that a township trustee road boss and some citizen will agree to fill approches to a bridge, cut down a hill or fill up a low place at 4 to 6 cents per cubic yard for earth, when a contractor upon like work does it under a competent engineer and receives double the price per yard and makes no money at it? With the facts before you do you not think there should be some change for the better in our system of spending our time (I will not say work) and money, that is assessed against our property, with the poll tax levied against male citizens between the ages of 21 and 45?

There has been enough time and money spent in this state since its settlement, if it had been judiciously expended, to have had good roads all over at least two-thirds of the state.

We have in some places plenty of rock suitable for macadam, and in other places gravel and other material suitable to make a nnished hard road, upon which the teamster could haul more than double the load with the same team than he could upon roads as they exist in most places in our state. And in all places the roads can be drained; high places cut down and low places filled up, properly drained, graded and rolled, so as to shed the water that necessarily falls upon our roadways, for in ninety-nine out of a hundred instances our roads wash out instead of wear out on account of improper construction and imperfect drainage.

What are the advantages of good roads? Grain and farm products can be marketed at less cost and at the proper time. For instance, one of you feeders, who depends upon the market for your feed, by some reason you have not feed enough to carry you through a protracted wet spell. Roads are so muddy that the person you depend upon to bring your feed will not haul it. With your other troubles such as muddy feed lots and repairing washed out fences, etc., I think that your thoughts will naturally turn to good roads, will they not?

When hay, wood and the other products of the farm are commanding a good price in the nearest market, the farmer with a good road can take advantage of it and market his crop at good prices, while he who has to flounder through the mud, drive around a steep, slippery hill or some impassable mud hole, will have to keep his produce at home, until the roads get good and the prices lower. There is hardly a member of this association, within the sound of my voice, who has not at times in their business career seen the benefits of good roads or rather the disadvantage of bad roads.

And again we are starting upon a new era in which good roads are essential to make a success of rural delivery. It is one of the points insisted upon by the Postoffice Department, before starting a rural delivery route and you will all agree with me that the better the roads are the better the service will be. That alone ought to concern every person interested in the stock business. Not only that persons living in the country are more or less isolated and at times when the weather is bad the roads are worse and you have more time to visit with your neighbor, besides the advantage of going to church and the children going to school, and in fact I deny any one to successfully show any disadvantage in having good roads.

I take it for granted that you all agree with me that good roads are essential for the prosperity and happiness of the people of this state. In view of that fact this Good Roads' Asociation was formed, a committee selected to look up the present laws and ask the legislature to amend, repeal and pass new laws, which will have the desired effect in making, improving and maintaining good roads.

The fact of the matter is we pay enough money in taxes and put in enough time on the roads, if it was judiciously expended under proper and intelligent supervisors to have what we need, and if every one will take an interest and demand such laws as will make some one responsible for the money and time spent upon the roads and a penalty for not performing their duty backed up by the citizens demanding that they get the worth of their time and money spent in road work as they are in seeing that they get honest weight in their flour, sugar, coffee and other necessities of life they buy and the best price and honest weights for what they sell. In fact have our good road work done in the same intelligent and economical manner that our other business is conducted; pay for what we get and get what we pay for, whether it be macadam, dirt or clay roads, or clothing, feed, lumber, stock or other commodities of life.

We want such laws as will allow our authorities to purchase and means to take care of such tools as are needed, so that work can be done to the best advantage, with power to have work finished properly, before it is paid for. We believe that you will take enough interest to have such laws passed by the present legislature as will insure the consumation of this.

You are all cordially invited to be with us in the city of Topeka on the 15th and 16th of this month at the meeting of the Good Roads Association and bring with you your county authorities and others, who are or should be interested in the cause of good roads.

CLOSING-OUT SHORTHORNS, AND POLAND-CHINAS....

WEDNESDAY AND THURSDAY, FEBRUARY 13 and 14.

SHENANDOAH, IOWA.

To Breeders and Farmers:

In announcing our closing-out sales of high class Shorthorn breeding cattle and Poland-China swine we may state as the sole reason that of advanced years on the part of one and ill health in family of the other. This is our first public sale; all our surplus stock has found a ready private sale.

There are about 75 head of cattle and about the same number of hogs—separate catalogues. Fifteen daughters of imported True Briton in the sale. All cows and heifers of breeding age safe in calf or with calf at foot. The fine Cruickshank bull Scotchman 137020 in service. Both Scotchman and imported True Briton are included in sale, together with a fine string of younger bulls. Catalogues sent to all who ask. Sale takes place at farm, two miles from town. Stop at Delmonico Hotel as our guests. Free conveyance to farm.

☞Get Catalogue of our fine offering of bred Poland-China sows.

D. M. PRIEST, F. J. MOFFITT,

SHENANDOAH, IOWA.

Col. F. M. Woods, Auctioneer.

Hogs, Steers, Calves, and Baby Beef for the Past Year at the Experiment Station.

J. G. HANEY.

During the past year the pig feeding experiments were completed, eighty head of steers were fed in four lots to test the preparation of feed. Seventy head of calves have been fed in various ways, by hand and ran with the cows, and at present 130 head of calves averaging over 400 pounds are being fed in nine lots for baby beef.

The feeding experiments have been conducted with the view of determining the best methods and combination for feeding our most valuable crops, and especially those that are most certain of making a yield during unfavorable years. These crops seem to be Kaffir-corn, alfalfa, and soy-beans. Corn has been fed in comparison with the Kaffir and in the various combinations. In the feeding of the 326 head of hogs, we determined that Kaffir-corn has about 80 per cent the feeding value of corn for fattening hogs when fed alone. The experiments show that a combination of feds is better than a single feed. Corn alone gave better results than

Kaffir alone, but when fed together, half and half, the results were better than corn alone. Contrary to the general opinion we found that grinding Kaffir for hogs was an absolute detriment to it. In three trials out of four there was a loss of from 9 to 14 per cent by grinding, and in the one trial where a gain was shown it was very slight. Soaking also showed the same result, a loss in every case of from 7 to 17 per cent. There is an advantage in grinding corn or soaking it if it is hard and flinty, but ordinarily I am convinced that grinding is not profitable. The gain from grinding, soaking, or cooking comes from the greater care in feeding. If ground, soaked or cooked feed is fed the feeder takes greater care in feeding, has the troughs clean, feeds at regular times and a regular amount, while if ear corn is fed there is not this care taken. Wetting the grain just as fed was found to be an advantage.

While Kaffir-corn fed alone does not give a grain equal to corn when the yield is taken into account it makes a different showing. At the college for the past eleven years our corn has averaged 35½ bushels per acre, and the Kaffir-corn 46 bushels per acre. A bushel of corn produces 11.9 pounds of pork, and a bushel of Kaffir-corn 10.6 pounds. This shows that an acre of corn will produce 410 pounds of pork, while an acre of Kaffir-corn will produce 487 pounds of pork. The college farm is upland, and is fairly situated to make this test a fair one. Hogs tire of Kaffir-corn more readily than they do of corn. It is more constipating and the hog fed on it exclusively becomes feverish and loses appetite. Mature hogs are not so much affected and will fatten readily, while younger ones will do well for a short time but soon become thin, increasing in weight but not filling out. We have never had a bunch to feed out evenly, no matter how even they were at the beginning.

But all these bad points disappear and good ones appear when some rich feed is fed with the Kaffir-corn. Alfalfa hay, soy-beans, or skim milk when fed with Kaffir-corn gave equally as good or better results as when fed with corn. Alfalfa hay fed by forkfuls in nat troughs in the pens gave very surprising results. Grinding the hay was tried but the whole hay gave the best gain. Hogs fed alfalfa hay and Kaffir-corn made a gain of 90 pounds per head, while those fed Kaffir alone made a gain of 52.4 pounds each, showing 73 per cent increase in gain from feeding the hay. The gain due to the alfalfa was 868 pounds per ton when fed whole and 716 pounds when ground. The gains per bushel of feed were as follows:

Kaffir-corn-meal and 7.83 pounds of alfalfa hay, 10.88 pounds.

Kaffir-corn-meal alone, 7.48 pounds.

Soy-beans gave wonderful results also. When fed as one-fifth the grain in ration they increased the gain from 14 to 96 per cent, and showed a saving of from 13 to 37 per cent of feed. In general it may be said that a pound per day during the fattening period is a fair gain for average hogs fed corn or Kaffir-corn alone. By feeding alfalfa hay the same hogs will gain a pound and a half a day, and with one-fifth soy-beans they will gain nearly two pounds per day. Skim-milk returned 26 to 43 cents per hundred when fed with Kaffir-corn or corn, but has its greatest value when fed to the young pigs.

STEER FEEDING.

In February 80 head of steers were bought in Kansas City. They were very common grades, quite a number of the southwestern type. In breed they represented fairly well everything. The 80 head were divided into four lots as venly as was possible, and fed as follows:

Shelled corn and whole alfalfa hay.

Shelled corn and alfalfa hay cut in inch lengths.

Corn-meal and whole alfalfa hay.

Corn-meal and alfalfa cut in inch lengths.

The grain and hay were fed together as nearly as possoble, the hay being put in the boxes and the grain put on top. The steers did the mixing. With the chopped hay this was a very satisfactory method, but the whole hay would be thrown out quite badly. A full month was taken to get on full feed, and then they were fed only what would be cleaned up before the next feed. The steers averaged 1,036 pounds per head at the beginning, February 13, and were fed one hundred and sixteen days, making a gain of 271 pounds per steer, or 2.34 pounds per day per head. They required only 743 pounds of grain and 385 pounds of hay to produce 100 pounds of gain, which is a remarkably low amount. The steers ate an average each of 19.4 pounds of grain and 8.9 pounds of roughness per day.

The following is the average gain per head of the lots:

Shelled corn and whole hay, 262 pounds.

Shelled corn, cut hay, 257 pounds.

Corn-meal, whole hay, 273 pounds.

Corn-meal, cut hay, 293 pounds.

The average gain of the steers fed shelled corn was 260 pounds, and of those fed corn-meal 283, showing a gain of 8.8 per cent from grinding. Chopping the hay showed a gain of only 2.6 per cent. But the lot getting the chopped hay and meal is fed the nicest of the lots. They seem to eat more regularly and it was not necessary to change the amount fed so frequently to keep the proper amount before them. They made 100 pounds of gain for 680 pounds of grain and 345 pounds of hay, and showed a better finish when sold.

They were bought by Armour at Kansas City and dressed out 59.3 per cent of live weight, showing 6.7 per cent yield of fat. The carcasses cut bright, were of good color on the outside and made good, clean, bright looking, well covered beef.

No hogs followed the steers as it had been too short time previous that disease had been prevalent in the yard.

Tank heaters were used to keep ice out of the tanks, and we are highly pleased with them. The cost is almost nominal for keeping them in operation, and as for time I am satisfied that keeping the ice out would require as long.

We keep the water at about the temperature of well water, and the cattle would go to the tanks and drink and return to the feed box, and not stand around the tank and shiver at the effects of sipping ice water. We burned on an average of 19 pounds of coal per day in each heater. One heater warmed the water for 40 head of steers, and of course would have warmed it for all that could drink at the tank.

The calf experiments have been in observing the growth of calves running with the cows, fed on whole milk, skim-milk, hay tea, and whey. The hay tea proved unsuccessful as a substitute for milk, as well as the whey. However, the whey experiment was not continued sufficiently to be decisive. The calves on skim-milk made a very satisfactory growth. Kaffir-corn-meal fed dry after the milk was found to be the best feed to go with the milk, but it must be fed dry and never put in the milk. The calves fed whole milk and a small amount of grain made a better gain than the calves with the cows. The gain of the three lots for the summer was as follows:

Skim-milk calves, gain per day per head, 1.55 pounds; those with the cows, gain per day per head, 1.7 pounds; whole milk calves, 1.95 pounds. The calves that ran with the cows are high grade Herefords while the whole and skim-milk calves are a conglomerate of everything. They were bought up about the town. There were 40 head of these calves in the three lots. They are being fed with 90 others, making 130 head in all for baby beef. Excepting the 10 whole milk, and 10 skim-milk calves the lot is made up of grade Hereford, Shorthorn, and Polled Angus.

Four lots of 20 head each are being fed as follows:

Corn and alfalfa hay.

Kaffir-corn and alfalfa hay.

Two-thirds corn, one-third soy-beans and prairie hay.

Two-thirds Kaffir-corn, one-third soy-beans and prairie hay.

Three lots of 10 each are testing the condimental feeds. All the lots have salt by them all the time. The lots are fed as follows:

Corn and alfalfa hay.

Corn, alfalfa hay and 1 ounce of salt to 1,000 pounds live weight, on the feed in twenty-four hours.

Corn, alfalfa hay and condimental feed as per direction.

The skim-milk and whole milk lots are being fed the same but separately.

The calves have been in the lot since October 22, but we have not fed heavily of grain as yet, and it is too soon to judge accurately what results will be. But the hand-raised calves have made the best gains so far. The corn is showing an advantage over the Kaffir and the alfalfa over the prairie hay, and as for the condimental feed, the lots have been fed the same. The lot receiving the condimental feed has gained 25 pounds less than the lot not receiving the feed.

The hand-raised calves are making a better gain than the calves that ran with the cows. Sixty head of the calves were bought in Kansas City and these are not making as good a gain as those that were raised near the station. The experiment has not advanced far enough as yet to be at all decisive. I hope I may be able to tell you of it further next year.

Hints on Hogs and Alfalfa.

J. H. SAYLES, NORCATUR.

I suppose you are all aware I am from the northwestern part of the state. I have been traveling some this summer and fall and have seen a good deal of the handling of alfalfa. In one instance I was at the home of a Mr. Walker, who lives on a stream that heads in Sherman County. I was at his place on the 6th of October, and he drew my attention to a piece of alfalfa which he had sowed last April. He said, "Now, there is a piece of alfalfa on what I call first bottom. I have mowed it three times." In October I walked into the alfalfa, and the blossoms of it touched my coat tail. I was surprised that in my further travels in the state I have not found any alfalfa hat will or has grown in any such manner, especially I noticed this was true of the eastern part of the state.

This man's way of raising hogs is to fence a piece of alfalfa, and turn them in on it, and then give them just enough corn to call them home at night. He says he can raise more hogs on ten acres of alfalfa with just a little corn each evening than from 100 acres of corn fed alone.

I have had a good many of the brothers here ask me about crops in that part of the country this year. You will remember this country is 200 miles west of here. When I was looking at Mr. Walker's alfalfa, I noticed his corn. He said it had been a dry year for him. One ear of corn that he showed me, especially, had 72 grains lengthwise, and had 22 rows, making something like 600 grains of corn for this dry year. The county commissioner of this county, Mr. Brahman, says he has 600 tons of alfalfa worth $6 a ton.

Now, I have also been asked since I have been here what is the prospect in that country—how do people live? How do they live in such a dry country? I will say that the dry weather does not seem to affect them much. Young stock cattle there are in good condition. You can go out there and pick out of any herd good beefs that have lived entirely off the grass without a grain of corn. But the alfalfa will not grow there very well without moisture. If you have a moist season there you can make it start, but you can not raise it without moisture. Consequently in dry weather, hogs that have to depend on the alfalfa crops do not do very well, unless they are placed on alfalfa growing in the bottoms. There it will grow, and the dry weather does not seem to affect it, although of course in the bottoms it is moist.

In June last a pest came in the shape of a dark colored worm. Some called it the army worm. They almost destroyed the first crop of alfalfa. There was one man who said he believed there were two bushels of the worms on his alfalfa stalks. I hope that they will be gone next year. They look like the common garden cut worm, and they would also change and eat up the garden truck. We hope, however, this pest will soon disappear. These worms destroyed my corn crop also. They left the alfalfa and went and ate up my corn.

Prof. Cottrell: These bugs were all over the state this year.

Mr. Sayles: I did not know that they were general over the state.

One-fifth of the usual amount of corn will fatten a hog if he has the alfalfa to run upon. One company out there have made themselves wealthy growing hogs and alfalfa alone. The first and second crops would be for hay, and the third crop would be their seed crop. The hogs would then run an the pasture. Their hogs are actually in better condition than are hogs in the eastern part of the country, and with much less proportion of sickness.

At the instance of some of the good people there I had occasion to take a trip east some time ago, and was subjected to a right smart of questioning. "How do you live out there, and where do you steal your corn," was asked me, to which I replied that we did not have to steal our corn, that we fed alfalfa instead. They wanted to know what alfalfa was.

Mr. (A Delegate.) The gentleman has cast some reflections upon the eastern part of the state. He says that they raise alfalfa out there and after cutting three times the blossoms would touch his coat tail.

Voice: Was he standing up?

Delegate: I sowed some alfalfa in April last, and not only cut it three, but I cut it four times, and I ought to have cut it a fifth time. I do not find it difficult to raise alfalfa that equals anything he has told us about, and I live in the eastern part f the state, too.

Mr. Ferguson: Out on the farm where I live I do not find it much of a job to raise alfalfa. This last spring I had about five acres of bottom land I wanted to seed. I put it to alfalfa, and cut three good crops off it this year. I think anybody can raise alfalfa. The secret of the whole thing is to keep the weeds down after it is up. On that piece of alfalfa I cut the weeds once a week. I do not think there is any farmer in Kansas but that can raise alfalfa. I have a neighbor who has a piece of alfalfa on upland which is completely covered with stone. This year he cut three good crops of alfalfa off that piece of alfalfa. Another has a piece of high upland. He plowed it last spring, and sowed it the next day. He now has the finest field of alfalfa you can find any place.

Mr. Clark: This is a surprise to me. I am glad of hearing my neighbor and fellow citizen of Shawnee County talk, for his talk encourages me to try alfalfa again.

Mr. Clark: Now, to be more serious gentlemen. I can not raise alfalfa. I have tried it both ways. When I was a boy in Indiana I had a surprise. There was a worm came that was a veritable pest. Our people thought it was the army worm, because it appeared in 1860 and 1861. It destroyed

Second Annual Sale of
POLAND-CHINA BRED SOWS,
BOARS, AND GILTS,
AT McCUNE, KANSAS, WEDNESDAY, FEBRUARY 27, 1901.
ZEIGRA BROS., McCune, Kansas.
WATCH FOR BIG AD. LATER.

DISPERSION SALE of SHORTHORNS!

TUESDAY, FEBRUARY 12, 1901, AT CLARINDA, IOWA.

50 head of Registered Shorthorn cattle go to the highest bidder—40 Cows and Heifers, and 10 Bulls, including my Cruickshank herd bull, Baron Favorite by Baron Cruickshank. All the young things are of his get. This will be an opportunity to judge of the value of a breeding bull just reaching his prime by the character of his get, on the one hand, and on the other of being able properly to estimate the present or prospective value of the young stock in the sale from a personal inspection of both sire and dam. My herd has been of straightforward useful character, and is now practically to be closed out, everything going that is in proper sale condition, owing to my temporary absence from the state the coming year. The herd is built up largely from the ever popular Rose of Sharon foundation stock. The catalogue will show a strong dash of Scotch blood in the offering. Among the cows is the 5-year-old Cruickshank, Gloster Lady, safe in calf to Baron Favorite, as also are all others of proper age, unless with calf at foot. All good cattlemen are invited to attend sale. Free hotel accommodations. Farm adjoins town. You can attend Moffitt sale next day at Shenandoah. Both sales in Page county.

Col. F. M. Woods, Auctioneer.

LEWIS ANNAN, Clarinda, Iowa.

acres and acres of crops. But those hoosiers fixed that army worm. They ditched around their fields with a ditch from 12 to 18 inches on the inside, and they made it perpendicular. They made the ditch from two to three feet wide, and when Mr. Army Worm would come to the field he could not get in. He would fall into the ditch. His brothers would come along and fall into the ditch upon the top of him, until the whole ditch would be full of that army worm. In this way they would be destroyed for the farmers would come along with their heavy rocks, and mash the life out of the worms. I guarantee that if all the farmers in Kansas who are troubled with worms of that kind or any kind, if they would follow this plan, they would soon be rid of them.

Mr. Warner: If we sow alfalfa when the ground is dry, if there should come a little shower afterwards, it will swell the seed and they will come up all right.

Mr. Sayles: I have virtually been accused of being a land agent. I want to say that I have not been working in that capacity.

Mr. ——— I did not accuse him of being a land agent. I simply wanted to warn him that he ought to know better than to tell his stories when Brother Robison is around for he will get beaten every time.

Kansas Semi-Centennial in 1904.

Hon. John E. Frost, president of the Kansas Exposition Company, Topeka, was introduced and spoke as follows:

I thank you for the opportunity of speaking to you for a few moments this evening. The territory of Kansas was created by act of Congress in the year 1854, so that the year 1904 will be the golden wedding anniversary of our state in its marriage with the United States.

It occurred early in the year to some of the thinking men of the state that it would be eminently fitting to celebrate that occasion in a proper manner, and they thought no better way could be suggested than to celebrate it by the holding of a great exposition. This proposed exposition is nothing in the nature of a state fair. It is not intended to have small exhibition at all. In Kansas when we do things we do them well. There is no use in undertaking to hold an exposition unless we hold a great big one. We can not do better than to commence by reading the call for the original convention, which resulted in the incorporation of the Kansas Exposition Association. This call was issued by the governor. The convention met in accordance with the desire of people from all parts of the state, and Governor Stanley welcomed the convention. Here it was determined to hold the Exposition. Accordingly, by order of the convention, a committee was appointed to take charge of the matter of incorporating the Kansas Exposition Association, with a capital of $50,000, under the laws of the state of Kansas, of which Association I have the honor to be president, Gov. Stanley vice president, and Mr. John W. Breidenthal treasurer. There are twenty-four directors, three from each congressional district of the state, and three at large, the three directors at large being Messrs. Coburn, Stanley and Breidenthal. The association has agreed to go ahead with its work. It is necessary to have the machinery for handling this exposition work; it has been necessary to incorporate companies for that purpose, and this company has been incorporated accordingly. We have asked each and every county of the state to appoint vice presidents of their counties, and many of them have done this.

There is a proposition to ask the legislature for an appropriation of $300,000. This is as small as should be appropriated for this purpose, and I think it is large enough to start with. It is the intention, if the legislautre endorses this great state enterprise, and makes an adequate appropriation, to then ask Congress for an appropriation of a million, or more. We have assurance of strong help in securing the appropriation from Congress. I have received responses from all but three of the Kansas delegation promising their hearty aid and coöperation in case the state makes the appropriation. We can have no standig in Congress, and no appropriation by Congress unless the state squarely backs the enterprise.

We will invite all the states of the Union to take part in this exhibition; also the countries neighbors to the United States. We think we can hold a creditable exposition which will be well attended and interesting. We can not expect to hold one which in magnitude will be in the same class as the St. Louis exposition, but we believe we can hold one as good, if not better, than the magnificent exhibition held at Omaha in 1898. Kansas is in a far better condition to carry on successfully an exposition of that sort than Nebraska was when she undertook it. Kansas has a population nearly 50 per cent greater than Nebraska, and the property of the state and its products are about in the same proportion. In Kansas we can make the finest exhibit of our agricultural products. We can make magnificent mineral exhibits. People outside of the state do not begin to realize how much mineral resource we have. And above all, gentlemen, and this was one of my thoughts from the first, this state can have the finest live stock exhibition ever held in the United States, or anywhere else. (Applause.) Kansas has the biggest and finest steers, the fattest swine, the fastest horses, and the best sheep in the Union. This organization of yours is in the interest of the live stock industry of your state. I ask you to endorse this enterprise, and to approve an adequate appropriation by the legislature. Your body is exceedingly influential, and you can be of great service in helping along this great enterprise. I hope we will have your hearty coöperation. Thank you, gentlemen.

DISCUSSION.

Delegate.—I make motion a committee of three be appointed to draft suitable resolutions endorsing the proposition.

Chair.—Any further remarks?

Prof. H. M. Cottrell.—I believe that there is no man in Kansas who knows the actual resources of the state, especially in a mineral way. Within the last year I have traveled over 78 counties, and it simply amazed me at the wonderful resources of the state. We ought to have this fair for the benefit of ourselves alone. Few of us realize how little is known in the East of our great possibilities. In 1897 I came back here after six years of work on the Hudson River. My friends there urged me not to come, and declared that if I went beyond Manhattan I would starve to death. Well, I came, and I have been beyond Manhattan, and I have not starved to death. If we can give this exposition, it will add fifty per cent to our wealth.

Secretary Heath.—I think this is a proposition which this association, with others, has long been waiting for. In every part of this great state is an intense, yearning desire for this exposition, so that we may show the resources of our great state. We are behind other states in this respect. If we can ever have a chance to make a representative exhibit, it will add ten times the amount of taxable wealth to the state it now has. The trouble we may be put to in giving this exhibition will be trifling as compared to the great benefit to be derived from it. The good thing about it is, after we once hold an exposition of this kind we will then be able to follow it up each year with an exposition such as every breeder of live stock wants. It is an important measure for every breeder of improved stock in Kansas, as well as every one else identified with the industrial interests of the state. We, as members of this association, have a big interest in this question.

Mr. Warner.—It seems to me that this is a question that we breeders, as a body, can heartily endorse. It is certainly a fact that as the saying goes, we need line upon line, and precept upon precept to assist us in the successful breeding of pure stock. If we can hold this exposition, and we can hold it if we will all take hold of it, it will certainly be of the greatest benefit, not only to the people of our state directly and immediately, but it will bring thousands of visitors and thousands of dollars to our state. Many of our own people have never seen, and probably never will see, a first class exhibition of the products of this or any other state, unless we succeed in holding this exposition.

An exhibition of this kind will afford us more benefit than could be derived from an investment of the same amount of money in any other possible way. Take it in any country. Take it in my own country, and consider that if the cattle were improved 10 per cent in quality which could easily be done, the the valuation of our different counties would be greatly increased, and would easily allow us to pay our proportionate part of the expense of holding this exposition. It would add thousands of dollars of taxable property to our state more than we now have.

Mr. J. H. Sayles—Mr. President, and gentlemen of this association, I am in sympathy with you in this matter. There is possibly no man in the house tonight who has travelled so far as I have. A good portion at least of my traveling this year has been through the state of Kansas, and I have had an opportunity to feel the pulse of the people on this subject. I have investigated it as far as possible for me to do in the space of time I have had to devote to it. I have found them almost to the man in accord with the idea. The stockmen favor it. They seem to realize that it would be of great advantage to them. I should like to see this association endorse this idea and give it all of the sympathy and encouragement it can, because I believe it will be a good thing, not only for the people here present, not only for the breeders present, rather, but for the entire state.

Mr. Glick.—If you will do the figuring, Mr. President, I will give you some facts. In 1899 the state of Kansas furnished over three million head of stock at the Kansas City stock yards. Over three million head! How many gentlemen here, how many gentlemen in Kansas, appreciate the stock importance of the state? Kansas furnished 700,000 head of cattle, about 2½ million head of hogs, 113,000 head of horses, and 110,000 head of sheep, aggregating over three million head of stock sold to the Kansas City stock yards from Kansas. That makes a pretty good record for our state. That shows just what was shipped from Kansas to the Kansas City stock yards. Then a large part of our live stock was shipped to St. Joseph, Omaha, Chicago, and St. Louis. I did not have time to ascertain the exact figures in regard to what was shipped to these points when preparing my paper in relation to the matter. Now I would like to ask the president if he has figured up what two pounds of flesh put upon each of these animals would amount to. Kansas furnished more stock to the Kansas City stock yards than any other seven states in the Federal Union combined. This makes another pretty good record for us.

RESOLUTIONS ADOPTED.

"Whereas, This association believes it appropriate and wise for Kansas to celebrate the golden anniversary of her admission to the Union by holding in 1904 a semi-centennial exposition of her resources with competition open to her sister states and the whole world; and

"Whereas, The Kansas Exposition Company has been duly organized by the public-spirited people of the state, and now asks the aid of our state legislature in the form of a suitable appropriation of $300,000; and

"Whereas, The appropriation asked for amounts to less than 10 cents per head on the stock annually shipped from our state to the single market of Kansas City, therefore be it

"Resolved, That the Kansas Improved Live Stock Association, in eleventh annual session, most earnestly seconds, on behalf of the leading industry of the state, the efforts of the Kansas Exposition Company, and its claim for support at the hands of our legislative body."

Kansas City Hog Show in 1901.

H. M. Kirkpatrick: The time is getting late, we are drawing to a close and some of the members are getting uneasy, and I do not think it advisable for us to go into a discussion of the advantage to be obtained from holding this exposition.

It will just give you a brief synopsis of what has thus far been done in the matter. The agitation of the proposition commenced along in the fall by an accidental meeting of 6 or 7 breeders of swine in Missouri and Kansas, and the question was asked why it was the cattle men should go ahead and have an exposition of their stock, while the hog men had no such exposition. They all thought something should be done to increase the interest in the hog industry of the country. The time of holding an exhibition was at once suggested to be at the time the cattle men hold their exhibition in Kansas City next fall. Mr. Frank Irwin was named to take charge of this and push it along, which he has been doing. The proposition of holding this in Kansas City is a question that might stand some little thought in regard to the interest the Kansas breeders might take in an exhibition held at Kansas City. We have tried year after year to interest the people of this state in a state fair. We have failed. There is no arrangement at this time by the state whereby it can take care of its best interests, and I guess we will have to do a little hustling for our hogs.

Now it was suggested last evening by somebody in connection with this, that Missouri, our neighboring state, in which the city of Kansas City is located, and where the exhibition is proposed to be held, is a competitive state. This may be true to some extent, but they all recognize, there in Kansas City, that the importance of their town is due more to Kansas than to Missouri

and that the stock of the western farms enters into competition with the cattle of the world. I know the feeling there is quite warm for the people of Kansas. We have the promise of making a very fine show there, and do not think we can find a better place. There has been some inquiry made as to what could be done, and we have been following up the proposition to see what could be done. We have met with a great deal of encouragement all around. I have visited the stock yards people, and while I have not their proposition in shape, I have it in a general way, and know what they will do for us. It is a matter that breeders of swine are more particularly interested in than other breeders, but I hope it will be made interesting to all. We do not think this association has any funds to help along anything of this kind ,and whatever is done will have to be done individually, I apprehend. I want to make a strong appeal to the individual breeders who can assist one way or another to do so. I think one good plan would be the offering of special prizes by the breeders. Money must be gotten from some source. There ought to be enough money donated to make it the greatest show of hogs ever made up to this time.

Mr. Cook of Wichita offers $25 for the best litter of five Poland-China pigs under 6 months old.

Committees on Hogs and Sheep for Kansas City Show and Sale in 1901: Swine, H. M. Kirkpatrick, Walcott; C. M. Irwin, Wichita; G. W. Berry ,Berryton; J. E. Newton, Whiting; D. L. Button, Topeka. Sheep, J. W. Higgins, Jr., Hope; E. W. Melville, Eudora; and J. N. Grau, Asherville.

Mr. John Cownie Takes Leave.

The time has come and I will have to leave you and return home, and before doing so I can't resist the temptation of saying a parting word to the farmers of Kansas, whom I have met in this convention. I desire to express to you the sincere pleasure that I have felt in meeting with you here in your thirtieth annual convention, and to assure you that in some respects—and I dislike very much to say it—you are far ahead of Iowa, especially in regard to your State Board of Agriculture. (Applause.) It is a humiliating confession, but I don't think that we should hesitate to express it even if it hurts at the time to do so. We have had, as you know, a State Agricultural Society in Iowa long before Kansas was a state, but the one aim and the sole object of that society has been to hold a fair once a year. We have an excellent fair—one of the best in the United States. We have a fine array of exhibits, and have done a great deal of practical work. We run a dairy during the week of the fair, and spend some $500 to $700 in milk to show the farmers and their wives the latest improved methods of making choice creamery butter. We have raised potatoes and corn upon the fair grounds, and we have contests every year with potato harvesters and corn harvesters. We have road grading contests and plowing contests, and great interest is being manifested in practical work. But we have never had a State Agricultural Society to compare with that of Kansas in the last few years. One reason was that we didn't have Mr. Coburn as our secretary. (Applause.) For the last dozen of years I have been before the committee in the legislature endeavoring to have our laws changed, and only last winter succeeded. In making my argument before the committee ,after they had voted unanimously not to change the law, I went before the committee myself with all the reports I could get of the State Board of Agriculture of Kansas—and Mr. Coburn had kindly forwarded them to me from time to time—I had my arms filled with them and laid them down, and beside them I laid our agricultural reports, and showed them how they compared. And some one of the members, when I got through, said that our report was nothing but an account of a trotting horse association. I don't know whether it was my eloquence or Mr. Coburn's reports, but I got a unanimous report from that committee in favor of our State Board of Agriculture, founded as this one is; and we have today instead of a State Agricultural Society, whose whole scope and aim is to hold a fair, we have now a State Board of Agriculture, and I am ashamed to say we are following where you led. (Applause).

New Points in Regard to Alfalfa.

BY PROF. H. M. COTTRELL.

As the time is short I will curtail all preliminaries in my remarks and get at the central point. In '94 the college put out a field of alfalfa. Last year was the driest year we have had in the history of college farming. We put some hogs on a field of alfalfa. Three years after in 1897 there was hardly any alfalfa left on the ground. We concluded the alfalfa was so poor that it would be useless to try hog experiments on it any more unless something was done to make it grow. We took a disk harrow and disked the land, with the result that most of the alfalfa was destroyed. We repeated the dose. That summer we cut three good crops of hay off that field of alfalfa. Wherever you can split the alfalfa root it throws up new stalks. Since then we have been disking each and every year.

This year we struck something new. All our alfalfa was disked and cross disked in the early spring. Manhattan was the driest point in Kansas this year. Ten inches of rain fell in Topeka, and we only got 1.19 inches. We had this dry season all through the summer. Off our field of alfalfa we got four good crops. As soon as the first load of hay was off we turned right around and disked again. We cut two or three inches deep and the result was that where we disked we got a good second crop. After the second crop was harvested it was still drier than when the first crop was harvested. At that time we had to feed our cattle on pasture.

As soon as the second crop of hay was off we turned in and disked it again. This was about the middle of August. This was all on upland and solid rock came within four inches of the surface of the ground. We succeeded in this way in getting a third good crop. Part of this alfalfa was severely pastured with hogs, and during the fall we were seriously bothered with worms.

The weather was so very dry this year that in some places the alfalfa was entirely killed out.

DISCUSSION.

Member: I sowed clover with my alfalfa, thinking that it might help it. I find that the alfalfa is not thrifty. I would like to find out a way for helping it.

Prof. Cottrell: Clover sowing is a great detriment to alfalfa. The clover takes the alfalfa right out. Disking will help the alfalfa grow. Alfalfa at the start is the weakest plant that is grown in Kansas. But after you get it started it is like Secretary Coburn says of the roots that grow down 129 feet through the mountain. It is there to stay.

Mr. Maguire: We have been successful in Reno County in sowing the alfalfa among the wheat, oats and rye. What do you think of that?

Prof. Cottrell: Well, you could not do that in our county. Alfalfa is a little weak baby plant. It must be encouraged to grow or it won't grow Sowing other seed with it is like putting a big hog in a pen with a pig so as to encourage the pig to eat corn. The chances are the pig will not get a chance at the corn.

Member: I do not think it necessary to be scared about the sowing of clover with alfalfa. It will be all right. The alfalfa will grow. In my opinion clover is the best seed that can be grown in the field. In my experience I have found that clover sowed with alfalfa will not hurt the alfalfa.

Mr. Harrington: I have been trying to catch on to this business for years, that is, the alfalfa business. Last year I thought I would get thoroughly ready before I sowed the seed. I plowed my land in July where there had been clover, and then harrowed it with a twelve foot smoothing harrow. Then I let it lay until the 18th of September. I then harrowed it again and got it as smooth as I could. I sowed the seed and then harrowed it again. I found afterward that some of the seed were buried too deep, but the crop came on and I never saw a better one. However, 20 pigs took possession of it, and I think they have clipped every bit of it. Yet it looks like a green field of wheat today. There is no doubt in my mind that the time to sow alfalfa is in the fall if the weather is fit. You have got to take into consideration the surroundings to get a good stand. You ought to have enough good weather so as to get a start of the alfalfa before the cold weather comes. It is very necessary to prepare the land early. The secret of getting a good stand of grass is to prepare the land beforehand and get it in thoroughly good shape. And this is the case at any season of the year ,and the man who prepares his land well before he sows the seed will, nine times out of ten, get a good stand no matter at what season of the year he sows it.

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The Pan-American Exposition.

W. H. BARNES, COMMISSIONER.

I come before you to-day as a commissioner of the Pan-American Exposition. I desire that you should know something about the work we are doing, and about the work that is being done in Buffalo for that exposition. There has been no better opportunity for Kansas to show her products and importance than the one offered to her by this exposition this year at Buffalo. I start in by saying that since the Centennial Exhibition in Philadelphia in 1876, Kansas has not had an opportunity to show her products and her advancement that will compare with that she will have at Buffalo in 1901. In saying this I am not saying anything against the World's fair at Chicago.

I am before you on this question for business purposes. I think it a good business proposition for Kansas to make a good showing at this exposition to be held at Buffalo. The Philadelphia exposition brought more money to Kansas than anything else that has ever happened since. It resulted in a great immigration to this state ,and a great influx of capital. I repeat that not a single word I say is meant in derogation of the Chicago show. Buffalo is in the middle of a dense population. I was in that city in September, and went all over the exposition grounds, and was greatly surprised to see the immensity of the undertaking, and the amount of the work that had been done there.

The exhibition will not be as large as that held at Chicago. This is not to be a world show—simply a pan-American, or all-American exhibition. They have 2,500 men employed there, and they work 18 hours a day. I was there at noon time and was surprised that they did not take a longer time for dinner. I was informed that the workmen only had 20 minutes, and that they worked until 10 o'clock at night. They had the buildings almost completed. These buildings are, most of them, immense structures. On the inside they have all the facilities for modern heating and lighting. They will be ready for use by May.

Now, I think this body ought to do something for that exposition. There will be a fine exhibition there by every other state in this Union. They are making extra large arrangements for live stock exhibitions, as well as industrial exhibits.

Recollect that Buffalo is only twenty-eight hours from here ,and that it is not going to be much of a job for us to go there and make a creditable showing, if we take it into our heads to do so. It is not impossible for us to go there. It will be far from impossible for the people of Kansas to make just as good an exhibit there as any state in the Union. The governor thought that $50,000 could not be used to any better advantage. He thought that this was a good thing as a business proposition.

I will say that last evening was begun a meeting with a view to having a Kansas building. The architect came before us and the plan was showed him. The successful bidder is Mr. Rose, of Kansas City, Kans., who is one of the finest architects in the state of Kansas. We want to have a building that will show what Kansas can do and make a name for our people that will be as good as that of any other state. If any of you want literature in regard to this, plenty of it can be had by writing to any of the commissioners.

I hope the stock breeders here will favorably consider this matter of a grand exhibition at Buffalo, commencing the first of May and continuing until November next. I hope that Kansas will be represented there, and that the live stock interests will not be neglected.

Member.—I feel that this body ought to do something in the way of preparing for this exposition. I think we are, or ought to be, enthusiastic enough to compete with anybody anywhere. It has been suggested that a committee of three be appointed for the purpose of taking charge of the Pan-American question. This committe should be a permanent standing committee, and is to represent the interests of the live stock breeder in making that exhibition.

Motion made to appoint a committee carried. Committee named: M. S. Babcock, Nortonville; Geo. W. Berry, Berryton, and O. O. Wolf, Ottawa.

[Owing to lack of space we are unable to give the general discussion on "Pure Bred Stock at the Agricultural Farm." Also the paper on "Pink Eye, Contagious Abortion and Other Ailments of Live Stock," by Dr. Tait Butler, of the State Agricultural College. Both will be published in a later number of the KANSAS FARMER.]

Secretary's Report.

Gentlemen of the Kansas State Board of Agriculture:—In the year 1900, as in other years, the work in your office and of your secretary has been entirely that of collecting, compiling ,editing, publishing and distributing information believed useful in promoting, everywhere, the interests of Kansans and Kansas. This work has gone on unceasingly.

Aside from the frequent bulletins pertaining to the extent and conditions of the growing crops, in season, and furnished to the press in Kansas and

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elsewhere, the more notable publications in the boards name have been:

First, the March quarterly, an illustrated volume of 304 pages. This was entitled, "Forage and Fodders," and intended as a comprehensive discussion, from the practical rather than scientific standpoint, of the production, uses and values of the various pasture and fodder plants, especially those found best suited to the purposes of Kansas farmers and stock growers. The volume also contained, carefully edited, the papers, addresses and discussions in the board's twenty-ninth annual meeting.

Second, the December quarterly, 84 pages, devoted to dairying and its prosperity in Kansas, with suggestions for the best management of the cow and her product: a study of cows and calves, cow-owners, feeders and feeding, milk and milk-making.

Third, the Board's Twelfth Biennial Report, for the years 1899 and 1900, covering 970 pages, with 180 illustrations, containing information upon the rearing and management of sheep for wool and mutton; the horse for business and pleasure; forage and fodders; cows, calves, milk and milk-making; roads and road construction; together with a careful analysis of the state's agricultural statistics, for the biennial period, and also for the preceding twenty years, as contained in tables, statements, summaries and diagrams, showing the population, products, assessed valuation, railroad mileage, and general development. The first copies of this will come from the binder's hands within the present week, and the distribution to a long array of applicants can begin on the first day the legislature makes available to us the requisite postage.

The work done in the board's name, as from the first, continues to attract most generous commendation, not only from the entire people of Kansas, in whose service it is primarily done, but from business men, commerical bodies, the press, and educators, from California to Cape Colony, who know of Kansas favorably through her Board of Agriculture and its thirty years of consecutive labor.

Members of the state administration, from executive to elevator boy, have treated the board's office and secretary with the utmost consideration, and no courtesy they could consistently grant has at any time been withheld. The executive council has, since our former meeting, allowed the board two additional and much better rooms for office purposes, and thereby promoted our comfort and convenience. The council has not yet so far advanced with definite plans for completing the capitol as to positively say the main floor rotunda shall, in compliance with our repeated request, be devoted to and fitted up as a permanent artistic exposition of Kansas' rich and varied resources. However, so far as known, there is but one man in all agricultural Kansas who objects to such use of this space, and he is the present genial and very capable state house architect, whose esthetic taste rebels at the suggestion of profaning the central court of this temple with anything like the "farm truck" by which it has been so largely builded. His predecessors have heartily favored our desire, and it is ardently hoped he will yet be with us, and thus make unanimous the granting to the great, plain people a request so entirely modest.

With her present progress, prosperity and citizenship, and the bright future of which her many advantages give unquestionable assurance, Kansas is certainly occupying a most enviable position in the sisterhood of state. To be the official business exponent of such a people and of such an establishment as this board, is an enviable privilege.

H. A. HEATH, Secretary.

Resolutions Adopted.

We your committee on resolutions in regard to pure-bred cattle on the state agricultural college farm would report that in our opinion it is not resolutions that are needed but hustling, and we recommend that each member of the breeders' association constitute himself a special committee of one to interview his senator and representative and urge them to secure the needed appropriation, and we further recommend that a committee representing breeders of horses, cattle, sheep and swine be appointed to present the matter before the ways and means committees of the senate and the house and before the governor.

O. P. UPDEGRAFF,
PROF. H. M. COTTRELL,
G. W. GLICK,
Committee.

Whereas, The stockmen of Kansas recognize in our present secretary of agriculture a man who is in close touch and sympathy with the welfare of the live stock interests, and is constantly striving to better their conditions, and ever advancing such interest by some exhaustive treatise bearing thereon—helpful, instructive and invaluable, and

Whereas, The said official is not given remuneration by the state for his services commensurate to the labor performed and importance of the duites devolving upon him, therefore be it

Resolved, By the Kansas Improved Stock Breeders' Association in its eleventh annual convention assembled that we earnestly urge the present legislature to place the secretary of our state board of agriculture on an equality in the matter of salary with our other state officials, such as bank commissioner, warden of penitentiary, auditor, and others, whose duties are no

(Continued on page 121.)

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this summer on account of the 1901 Pan-American Exposition will be the Nickel Plate Road. Countless thousands will visit this one of the greatest expositions of modern times. The Nickel Plate Road will be the popular line. The excellence of its service is well recognized by the traveling public, and the reputation of its train employes in their uniform courtesy to passengers is well known. When you go East see that your tickets read via the Nickel Plate Road. Write, wire, 'phone, or call on John Y. Calahan, General Agent, 111 Adams St., Chicago, Ill.

Back on Corn Growing.

J. R. Ratekin & Son, the well known seed corn growers at Shenandoah, Iowa, say that advertising is a good deal like kite-flying. The boy needs a good big tail to his kite to balance things, and the Kansas Farmer infers that the Ratekin seed corn establishment over in Iowa needs a little more breeze, as well as a little more "tail" hitched on to the advertisement to "balance things up." The proper thing for Kansas Farmer readers to know about at this time is the "Back on Corn Growing" just out of the press. This book of fifty pages is without a doubt one of the completest and most readable of its kind ever brought before the public. It is a book of Mr. Ratekin's own compiling. It deals primarily with the question of corn growing in all its phases over a large stretch of territory. Rather more than incidentally of course it brings these questions down to the seed grower's point of view. The book is nicely illustrated. It gives many a good practical tip to the corn growing world. If the farmer goes without this book he is standing in his own light. It would seem that a big corn growing state like Kansas should need every aid that can be brought to bear on the question of increasing yield per acre. Secure Mr. Ratekin's book and see if it sheds any light on such questions. The Ratekin seed distributing establishment is situated in the richest corn section of Iowa. The book, however, deals not alone with corn culture; it covers many points in wheat culture, and the growing of other crops, as sorghum, oats, rape, etc. See the book—it costs 4 cents for postage. Read the advertisement.

Cause for Gratitude.

Chicks in the background—"Look! The Leghorn chicks are going to get licked!

Ain't we glad our mother was a wooden hen."

By the way, George H. Stahl, Quincy, Ill., the incubator manufacturer, has marketed another hatcher. This very meritorious machine is called the 200-egg Wooden Hen. It is an enlargement of his

famous little 50-egg hatcher, favorable known the poultry world over. This new incubator is in answer to a great popular demand for a very simple, but reliable machine, at a moderate price—a demand that forced a large production, lowering the cost of manufacture. The price is $12. A first-class 200-egg incubator at $12 is a surprise—a great surprise when we have assurance that it is thoroughly well made; a marvel of simplicity, and so perfect in its working that it hatches every fertile egg. Mr. Stahl will send free circular or catalogue to prospective purchasers.

THE OSBORNE FARM HERD OF

Aberdeen-Angus

WILL OFFER AT..... PUBLIC SALE AT THE FARM...

FEBRUARY 19,

The Following High-grade Stock: Seventy-seven choice 2-year-old Angus steers; 66 high-grade cows and heifers, bred to registered Aberdeen-Angus bulls; 100 calves; 40 hogs; 5 horses; machinery, etc.

For further particulars, address..... W. O. PARK, Atchison, Kansas.

CRESCENT HERD OF

POLAND-CHINAS

AT PUBLIC SALE!

TUESDAY, FEBRUARY 19, 1901,

At Farm, Ten Miles Southeast of Hutchinson, Kansas.

Thirty-two Bred Sows and Gilts; 10 Serviceable Boars; 40 Fall Pigs. Included in sale are GUY DARKNESS 18292, and PERFECTION CHIEF 24978 Up-to-date breeding. Good individuals. Catalogue ready. Send for it. It gives terms, breeding, how to send mail bids. Address

SAM W. HILL, Hutchinson, Kansas.

J. P. McCORMICK, Auctioneer, Mt. Hope, Kans. T. H. FOLEY, Assisting, Hutchinson, Kans.

THE LINCOLN IMPORTING HORSE CO.,

LINCOLN, NEBRASKA, Calls Attention to the Following Facts:

Our Percheron stallions are beautiful coal blacks.
Our English Shire stallions are clean chestnuts and dark bays.
Good bone, good back, good quarters, and GOOD ALL OVER.
With moderate flesh, 2-year-olds weigh 1,675 to 1,800.
They show action and style equal to an English Hackney.
The exhibit made was at the Nebraska State Fair.
They won first in their classes and sweepstakes over all ages.
We boldly assert no better stallions in America.

MANGLESDORF BROS. CO.,

We Buy and Sell. Write for Catalogue and Prices.

ATCHISON,

Western Seed and Agricultural House. KANS.

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

Have sold for, and am booking sales for leading stock men 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.

ALL COMPETITION DISTANCED

The fast trains of the Union Pacific reach San Francisco fifteen hours ahead of all competitors. If you are in no hurry take a slow train by one of the detour routes, but if you want to get there without suffering any of the inconveniences of winter travel, take the only direct route,

THE UNION PACIFIC.

Detailed information furnished on application.

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

STEEL ROOFING

THE ONLY TOOLS YOU NEED.

5000 Squares

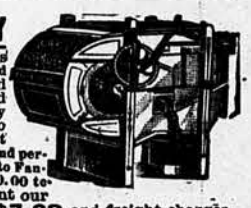
BRAND NEW STEEL ROOFING

Bought at Receivers Sales, sheets either flat, corrugated or "V" crimped. Price per square of 10x10 feet or 100 square feet..... $1.75

No other tool than a hatchet or hammer is required to lay this roofing. We furnish FREE with each order sufficient paint to cover, and nails to lay it. Write for Free Catalog of general merchandise bought by us at SHERIFF'S and RECEIVER'S SALES. "Our Prices are ONE-HALF of others."

CHICAGO HOUSE WRECKING CO.
West 35th and Iron Sts. - Chicago.

SEND NO MONEY



if you live within 500 miles of Chicago (if further, send $1.00,) cut this ad. out and send to us, and we will send you this Fanning Mill by freight C. O. D., subject to examination. Examine it at your freight depot, and if found perfectly satisfactory and equal to Fanning Mills that retail at $20.00 to $25.00, pay the freight agent our SPECIAL PRICE $7.98 and freight charges, less $1.00 if sent with order. The mill weighs 120 pounds and the freight will be about 70 cents for 500 miles, greater or shorter distances in proportion. EVERY MILL IS COVERED BY A BINDING GUARANTEE; more wind, more shake, carries more screen and will do more and better work than any mill you can buy for $20.00. Will separate wild seed from wheat in one operation, will separate foul seeds, such as mustard, pigeon grass, etc., from flax on once going through the mill. It is a perfect cleaner of clover and timothy. Made of the very best material. We furnish with it one wire wheat hurdle, three sieves, wheat screens, wheat grader, corn and oat sieve, and barley sieve. Capacity 60 bushels per hour.

$7.98 IS OUR SPECIAL OFFER PRICE. Order at once. Write for free Agricultural Implement Catalogue.

Address, SEARS, ROEBUCK & CO. (Inc.), Chicago.

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
W. B. Roby.....Circulation 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 $16.00 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 W. 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. Come, let us immediately double the circulation of the "old reliable" KANSAS FARMER. Address, Kansas Farmer Company, Topeka, Kans.

We want a good reliable man or woman in every county to act as local agent for the KANSAS FARMER. We offer a good proposition to the right parties. In answering please give some one as reference and also state how much time each week you can give to the work. Address

THE KANSAS FARMER,
Topeka, Kansas.

NEW SEED FOR THE HARD WINTER WHEAT.

Several weeks ago a movement was started to secure fresh supplies of hard winter wheat for sowing in Kansas next fall. The suggestion was made by Secretary Coburn, and grew out of the fact that during the 25 years which have passed since the Russian Menonites first introduced hard winter wheat, this most excellent variety has become considerably mixed with other varieties. No care has been taken to either improve or to preserve from depreciation the excellencies of this wheat. It is, therefore, believed that, high as is the quality of this grain which has established a place in the markets as "Kansas hard winter wheat," a better article may be had from the original source.

Speaking of this variety, Prof. M. A. Carleton, Cerealist of the U. S. Department of Agriculture, says in a recent report:

"Perhaps the most remarkable development in wheat culture in this country has been made in the Middle States of the plains, in what we may now call the hard winter wheat district, all brought about through the introduction of the hardy, red-grained wheats. Twenty-five years ago very little hard wheat was grown in this region the seed being brought by the early settlers from states farther east, where soft wheats were chiefly cultivated. Also, spring varieties formed the basis of a large proportion of the wheat production. But the spring wheats were severely rusted, injured by drought because of late maturity, and in some seasons almost wholly destroyed by chinch bugs, while the soft winter sorts, such as white Michigan and Poole, also rusted badly and were not able always to stand the winters. For some time these defects were overcome in great measure by the use of the variety Odessa, popularly called "grass" wheat in some localities, which is probably equivalent to the variety Ulka of southern Russia. It is hardy, red-grained, rather rust resistant, and has the additional advantage of being adapted for either autumn or spring sowing. A little later, the well-known variety Fultz also became quite popular in the West, as it is still in the greater portion of the United States.

"But the variety which more than all others finally completely changed the status of wheat culture in this district, is that which is commonly but unfortunately known as Turkey. It is bearded, hard red wheat of the highest class, coming originally from the Crimea and other portions of Taurida in southern Russia, and not from Turkey as the name would imply. Within a very small area in Kansas, Turkey wheat has been grown about twenty-five years, but its merits have become generally known only during the last twelve or fifteen years. It is now a favorite variety in the middle great plains. By the use of this variety autumn sowing is now made practicable in most seasons to the northern limit of the district, and the winter-wheat flour from this region has obtained a reputation for quality of the very best, and distinctly its own, in the foreign markets. At the same time there is no longer so much damage resulting from the attacks of rust and chinch bugs. As it is also one of the most drought-resistant sorts, it has made it possible to extend the winter-wheat area farther westward as well as northward."

For the purpose of renewing in its purity this most valuable wheat, the Kansas Millers' Association and the Kansas Grain Dealers' Association took joint action to arrange for the importation of seed wheat from the Crimea in sufficient quantity to supply at reasonable price every farmer in Kansas who desires to keep at the head of the procession. For this purpose they appointed a committee to have charge of the importation and distribution of the grain. Mr. B. Warkentine, a well known miller, of Newton, is chairman of this committee.

Under the plan adopted, any farmer who desires to secure a supply, either large or small, of this seed, at the estimated cost price of$2.50 a bushel, can do so by placing his order and the cash with his local miller or grain dealer.

Mr. Warkentine states that a suitable person has been secured in the Crimea to select and purchase the wheat and that he expects to cable the order within a few days. It will, therefore, be necessary for all who want to avail themselves of this opportunity, to place their orders immediately.

ALFALFA IN EASTERN KANSAS.

At a largely attended farmers' institute at Gardner, Johnson County, last week, the subject of alfalfa came up incidentally in connection with an address on hogs. It transpired that but little of this valuable forage is grown in the vicinity of Gardner, and the impression that it is not adapted to Johnson County conditions is pretty firmly rooted.

The need of alfalfa is less severely felt in this part of the state than in many others, on account of the certainty and abundance of the red clover crop. The farmer who succeeds with red clover is not an object of sympathy, even though he were unable to raise alfalfa. The farmers in Johnson County have found red clover admirably adapted to their system of rotation of crops, and, very naturally, there is a plentiful absence of complaint about impoverishment of the soil.

Red clover furnishes a large amount of protein in the pasturage and in the hay, and is, on this account, an excellent feed to go with the corn, which is so abundantly produced in Johnson County. But as a producer of digestible nutrients, red clover is considerably inferior to alfalfa. Calculations of the values of hays made from these legumes, based on corn at 27 cents per bushel, bran at $11 per ton, shorts at $12 per ton, and linseed meal at $22 per ton show a considerable superiority for alfalfa over red clover hay. The average digestible constituents, the value of each, and the total values of the hays are shown in the following table:

		Dry matter in 100 lbs.	Digestible protein in 100 lbs.	Digestible carbohydrates in 100 lbs.	Digestible fats in 100 lbs.	Total value per 100 lbs.
Alfalfa	pounds	91.6	11.0	39.6	1.2	....
	cents	....	37.1	12.7	.7	50.5
Red clover	pounds	78.8	6.8	35.8	1.7	....
	cents	....	22.9	11.5	1.0	....

It will be seen from the above results of calculations that, while properly cured, red clover hay is worth $7 per ton, on account of its superior digestibility, and especially on account of its large content of digestible protein, properly cured alfalfa hay is much more valuable, being worth $10 per ton.

The larger amount of digestible protein found in alfalfa hay makes it especially desirable to feed with corn, which, while exceedingly rich in digestible carbohydrates and fats, has not enough digestible protein to make it a well balanced feed.

While the calculation shows alfalfa hay to be equal in feeding value to shelled corn, pound for pound, it must not be presumed that alfalfa is a suitable feed to take the place of corn. The carbohydrates and fats in which corn abounds are especially adapted to fattening animals—to laying on lard and tallow—while the protein in which the alfalfa is so rich is adapted to growth of lean meat and the production of milk and eggs.

While many, perhaps most farmers in Johnson County will doubtless continue to raise more red clover than alfalfa, there is no apparent reason why those who desire should not have the benefits of alfalfa as well. Alfalfa needs a good strong limestone soil and a chance for its roots to go down to permanent moisture. These roots are not averse to finding their way among rocks, and they seem to rejoice in the opportunity to penetrate many feet in depth.

Doubtless the best time to sow alfalfa in eastern Kansas is late in summer. If a crop of oats or millet have been harvested, and the land immediately plowed and harrowed so as to retain the moisture, the harrowing being repeated often enough to prevent the formation of a crust, and to destroy all weeds as the seeds germinate, an ideal field for alfalfa should result. As soon in the late summer as it can be assumed that no weeds or grass will start, the alfalfa seed should be sown at the rate of 20 pounds to the acre. It is best sown with a drill, but broadcast seeding and light covering, as for clover, succeeeds very well. If the soil has not moisture enough to assure the continued growth of a tender plant, sowing should be deferred until such condition shall exist. Alfalfa seed germinates quickly under favorable conditions, and the plants grow rapidly at both top and root. But while young they are easily smothered by weeds or grasses, and this makes spring sowing on weedy ground undesirable. They are easily killed by frost, and this makes late fall sowing unsafe. When once well established, they are extremely tenacious of life, and their growth is exceedingly rapid, and they so occupy the soil, if the stand is good, that grass and weeds have little chance. This disposition, to monopolize the soil makes it exceedingly difficult to remedy a poor stand by after-sowing. The old plants are apt to sap the soil of moisture to such a degree that the young seedlings perish.

In many parts of eastern Kansas farmers have thought, after one or two trials, that their part of the state was not adapted to alfalfa. But wherever a good strong limestone soil has been prepared and sown as above suggested, success has generally been attained and prosperity has been correspondingly accelerated.

RABBITS IN THE CATALPAS.

EDITOR KANSAS FARMER:—I have read the articles in your paper of January 17 on "Artificial Forestry" with great interest. Last November I set out about 10,000 of the Catalpa Speciosa. I find the rabbits are working on them badly. I would like to know the best method of protecting a grove of from 10 to 25 acres of young Catalpas from the depredations of rabbits. My grove is in an out of the way place and is where rabbits do congregate in large numbers. I want to put out 20,000 more next fall and am anxious to learn the best method of protecting them from rabbit pests. J. E. R(fffl*&4.

Girard, Kans.

In the opinion of some planters it is not disadvantageous to the Catalpa Speciosa to be girdled or even eaten off during the first winter by rabbits. In most of the cases reported, however, the seedlings had been planted in the spring so that they had a summer's growth before they were "cut back."

The most effective method yet devised for ridding a place of rabbits is to trap them. Mr. Walter Wellhouse invented a trap several years ago which proved good for "cotton tails." The jack rabbit has not yet given out information as to the kind of trap he is willing to go into.

The Wellhouse trap is a box made of 6-inch fencing, old boards preferred. It is 22 inches long. The front end is closed only by a wire door, which is hung from the top and opens inward. A cleat across the bottom prevents the door from opening outward. In setting the trap the door is fastened open by a fine wire which is attached loosely along the under side of the top board of the trap. This trigger wire is bent downards near the rear end of the trap and formed into a loop or a figure 8, so that as the rabbit crowds into the rear end of the box he is sure to push against this wire and thus move it backwards, releasing the door, which falls and makes him a prisoner.

The cotton tail is generally looking for some dark hole in which to hide as a protection from enemies and cold, and this trap exactly suits his mind. About three of these traps are used to the acre. They are not baited in any way. They may be placed in rows with the open ends in one direction in one row and in the opposite direction in the next row, so that when the boy goes to get the rabbits he can see into one row while going one way and into the next row while returning.

For jack rabbits, grey hounds and the gun are perhaps the best remedy.

THE NATIONAL LIVE STOCK ASSOCIATION.

The fourth annual convention of the National Live Stock Association met at Salt Lake City, January 15. This association represents one of the largest industries of the world. Its investments in live stock are estimated at $3,000,000,000, and these investments are turned into market about once in two years.

The proceedings of so august a body command profound attention from statesmen and thinkers.

Following is a brief summary of some of the important resolutions passed:

Resolution regarding the gathering of live stock statistics upon the same lines as those now in vogue as regards cereals; a request to Congress to make the present census bureau a permanent institution.

Resolution congratulating and indorsing Chicago and Kansas City in the policy of holding annual live stock shows.

To ask for the appointment of a special commission to oppose any curtailing of the existing tariff on wool and hides.

Indorsing the Cullom amendment to the interstate commerce bill.

In regard to the Nicaragua canal.

In endorsement of the efforts of the Irrigation Commission.

Admitting members into the National Live Stock Association who reside in Canada or Mexico.

In regard to the extension of the existing time limits on live stock in transit.

In regard to the enlargement and protection of Galveston harbor.

Expressing thanks to those senators who were instrumental in obtaining stock census.

Of thanks to Supt. Thomas, of the Associated Press, the Salt Lake papers and the press of the country for the favors extended (rising vote).

Of thanks to Salt Lake City for the good time enjoyed by the delegates and friends.

To admit sheep, cattle and horses to graze on the forest reserves.

In favor of uniform cattle inspection.

Opposed to the Grout oleo bill.

The officers of the National Live Stock Association for the ensuing year are Hon. John W. Springer, president; John M. Holt, Montana, first vice president; Frank J. Hagenbarth, Idaho, second vice president; C. F. Martin, Colorado, secretary; Fred P. Johnson, Colorado, assistant secretary; George L. Goulding, Colorado, treasurer.

Not a Visitor.

Mrs. Gadd—The new minister ain't much on visitin', is he?

Mrs. Gabb—No, I guess maybe his wife is a purty good cook herself.—New York Weekly.

Constipation leads to liver trouble, and torpid liver to Bright's Disease. Prickly Ash Bitters is a certain cure at any stage of the disorder.

"When the grip left me my nerves and heart were badly affected; but I began taking Dr. Miles' Nervine and Heart Cure and was soon all right."—Wm. Roericht, Eau Claire, Wis.

KANSAS IMPROVED STOCK BREEDERS' ASSOCIATION.

(Continued from page 119.)

more important, and less arduous, and also respectfully and further urge that the matter of a deficiency appropriation of $500, for salary, for each of the two fiscal years covered by the preceding legislature, be provided for.

Resolved, That the secretary of this association be instructed to transmit copies of the above preambles and resolutions, properly signed by him, to the chairman of the ways and means committee of each branch of our present legislature. Adopted unanimously.

Election of Officers.

Mr. Babcock: I wish to name for president a man who is a brother breeder, who has the interest of pure bred stock at heart, and has had for a long time. He has the ability to do the work as president of this association in a proper manner. He, with his great experience and ability, can do it better than any of the rest of us. I present to you the name of Gov. Glick.

Mr. Hubbard: I move that the rules be suspended and the secretary be ordered to cast the vote for the whole association for ex-Governor Glick as president for the ensuing year.

Mr. Heath: In behalf of the 300 members that have paid their membership fee and the 500 more that are going to pay it I cast the entire 800 votes for G. W. Glick for president of this association.

Mr. Morse: In behalf of the hog men of the state, I want to nominate one who has been one of the leading members of this association, and one of Kansas' most enterprising breeders are through all the years of depression of the hog business, John Bollin, of Kickapoo ,as vice-president of this association for 1901.

Mr. Babcock: I move that the secretary be ordered to cast the vote of the entire association for Mr. Bollin as vice president of this association for the ensuing year. Motion carried.

Mr. Warner: There is an old adage that it is not best to ride a free horse to death, but nevertheless as our secretary has been a very efficient one, I nominate Mr. Heath as our secretary for the coming year. Mr. Heath was unanimously elected secretary .

The following gentlemen were elected directors: H. W. Cheney, Topeka: John Warner, Manhattan; Chas. E. Sutton, Russell; T. A. Hubbard, Rome; J. H. Sayles, Norcatur.

THE BREEDERS' ANNUAL BANQUET.

For the fifth time annually the Kansas Improved Stock Breeders' Association, on the evening of the closing session, went into a feeding experiment. To this experiment were added representatives of the legislature, the state dairy association, the poultry show, the agricultural college, and the Topeka commercial club.

In accordance with a new economy in flesh production, subjects of the experiment were placed on full feed, with the exception of a few to whom the early trains had caused an appetite, which destroyed anxiety. Every member responded generously to the ration on which he was placed. This ration, aside from the regulation roughness and grain, contained as a conditioner the time-honored McAfee cider.

At the close of the feed, Secretary Heath introduced as toastmaster the Honorable T. A. Hubbard, president of the Kansas State Board of Agriculture. With his look of peace, and his tones of continued benediction, Mr. Hubbard opened and conducted the oratorical part of the program in a manner soothing as the incense laden atmosphere of an oriental banquet hall.

To respond to the toast of "The Dawn of the Twentieth Century," Toastmaster Hubbard introduced the new president of the Kansas Improved Stock Breeders' Association, ex-Governor Glick. In acknowledging the introduction, the Governor said: "I had thought Mr. Hubbard a breder of hogs, but I discover now he is only a soapmaker, and to be using his produce on the audience in my behalf. The most glorious thing in the future as viewed from the dawn of this century is the possibilities opening to Kansas enterprise. In the light of the past we can predict success for it without limit. I have seen it grow. When this commonwealth began—when we had a population of 60,000—the enterprise of our territory doubled it in the reports, and we gained admission into the union. The same enterprise has pushed us with unwavering gait past our sister states, until we stand ready to lead the race into the century ahead. As a commonwealth of agriculturists we have every advantage; every man of the state his own manager and own planner makes us generative of enterprise far beyond any unity composed of few heads and many subordinates. As agricultural producers we long since took the lead. Our surplus disposed of at the single market of Kansas City in 1899 amounted in live stock alone to over three million head, exceeding the shipments to the same market from the six states next in importance. This does not include the vast number sent to Topeka, Wichita, Omaha, Chicago, St. Joseph and St. Louis. When the crop of Belgian hares has reached exporting size we will take less pride in proclaimng the numbers we have to spare."

Dr. A. H. Warner of Topeka responded to the toast, "A Stream of Milk." "To show my fitness for talking before this association, I want to give one of my earliest observations along the line of fine stock. It was at a county fair, where I found in a row of stalls, standing together, a lot of Hereford cattle. Without any knowledge of such things to tell me the white-faced beasts belonged to a single breed, I remember thinking the management had shown remarkably good taste in arranging the stock so that those similarly colored stood together. For my part of the program I will pass up all discussion of big prices and gigantic statistical figures, and talk to you of little things typified by the title of this toast, A Stream of Milk." Following this preliminary, Dr. Warner talked entertainingly of the importance of little things in the economy of the farm.

Introducing H. W. Cheney, of Topeka, to respond to the toast, "Our Friend the Enemy," the toastmaster related a time-honored minnow story, which he attributed to a recent experience of the speaker. The "enemy" of Mr. Cheney's speech were our friends across the water, who alternately clamor for our agricultural products and legislate against them. "This," said Mr. Cheney, "we shall yet conquer by the winning ways of our bacon hog, the charms of our big steers, and the indispnesability of our cereal products." And appropos he recited the following contributed poem:

THE CHESTER-WHITE PIGLETS.

BY JAMES COURTNEY CHALLIS.

How dear to my heart is the sight of those pig-
lets
(I've sung it before, and I'll sing it again)
The polite little, bright little, white little pig-
lets,
The Chester-White piglets we have in the
pen,
The dear little piglets,
The queer little piglets,
The Chester-White piglets we have in the pen.

Ah, sweet is the music with which I am greeted
When corn I throw in, as I do now and then,
As if they would thank me for being well
treated,
Those musical piglets we have in the pen,
The hunt-around piglets,
The grunt-around piglets,
The Chester-white piglets we have in the pen.

And how they can root with their little pink
noses!
They want the whole earth—just the same as
the men.
But are willing to dig for a living, thank Moses!
Those Chester-White piglets we have in the
pen.
The scoot-about piglets,
The root-about piglets,
The Chester-White piglets we have in the pen.

To the toast, "The Beef Animal of the Future," Mr. A. B. Mathews, of Kansas City, Kans., replied: "I believe Kansas is destined to produce not only the greatest domestic animals, but also the most perfect of men. The location of Kansas is along that parallel of latitude which for centuries past has always been the most productive of species of every kind."

Chas. H. Ridgway, of Ottawa, an ideal fair secretary and a model insurance official, a man you all know and admire, will respond to the toast, "A Dual Experience, or Breeders vs. Politicians."

"When your honored tosatmaster announced to you this subject and who was to respond, you no doubt wondered what does he know about such things? That is true. This toast was assigned on account of my inexperience, but like so many others who have passed away and others yet to follow, I will say to you, what I do say is the truth. No doubt all my friends will acclaim their attest if you will ask them in confidence. Breders vs. Politicians. A very peculiar combination, still a good one. There has no doubt to my mind been some good politicians spoiled by making poor breeders of them, and good breeders spoiled by being politicians, yet withal, a good breeder should be a good politician, for what the country needs as much as good laws, or good money, is good men to look after the affairs of state, and a man careful, diligent, painstaking and researchful as a breeder, should make a good politician. You ask, why good? Simply this: our country needs for is advancement good men in charge d'affairs. Good breeders are good men and why not make good politicians, for politics is the essence of government. Government derives its powers by consent of the governed. If the good in our land do not participate in breeding pure legislation we will have vicious laws framed by and for vicious people. What we want is a herd or two of Shorthorns, white-faces, Polled, Morgan, Hambletonian, Wilkes, Berkshires, Poland. Merinos, Roundelets, and other good ones: like Glick, Harris, Hubbard, Westbrook, Herrington, Updegraff, Potter, Kirkpatrick, Irwin, Wolf, Stannard, Cook, and others I might mention did time permit, so that the breed will not become extinct; like poor politicians should. We need the good successful breeder to take a hand in politics and go at it with the same determination that he does in perfecting his herd. Some of the most successful breders have and are now occupying with credit, high and responsible positions in the gift of the people. Good legislation has been looked after with the same care as the perfecting of the animal. The good breeder to-day is needed in political life. He should not abandon his influence to the mongrels, for at eve after the busy day when he sits at home, after partaking of his well earned repast, sitting and watching the embers glow in the fire, he says to himself: What will continue these conditions for my wife and children? What will protect them in the fruits of my labor? What will vouchsafe to them the freedom I have enjoyed? The still voice can not help but whisper, the influence of good people and the wise laws passed by good men for my protection. The need of the hour is more pure breeding into our political life, and I hope that every breeder here will continue to improve his stock; at the same time devote a part of his time in improving the political atmosphere of his locality, thereby assuring himself that the persons whom they placed in office by his influence are the ones in whom they have confidence. Gentlemen, I thank you."

"A Man of Two Centuries," announced Toastmaster Hubbard, and added, "He ought to be an old rascal, hadn't he?" as he introduced Honorable T. M. Potten of Peabody. "Not necessarily," responded Mr. Potter. "The man of two centuries is the man of today, stepping from the one to the other. Some one has said if we wish to see clearly the character of a man look into the foundation character of the generations that preceded him. The foundations of our characters were builded by those who landed centuries ago on the forbidding New England coast. Had they landed in an Eden like Kansas there would not have been formed the rugged strength of Kansas, and this is now her legacy. The discoverer of the principle of the lever and fulcrum said 'Give me a place to stand, and I will move the world.' The man of two centuries, standing on the foundation of knowledge gleaned form ages passed, with the lever that science has made for him (the harnessed steam, the caged lightning, the imprisoned heat of the sun) does he not shake the earth?"

Responding to the toast, "The Hairless Hen, or Poultry Without Fad," Senator G. B. Ross, of Rice County, replied: "I am something of a politician, and maybe a little more of a Shorthorn man, but I am a regular chicken crank; and if I had any one of you in a room alone I could talk chicken to you until you would believe in the hairless hen or any other monstrosity proposed. But it has not been in my experience to speak before so large an audience, and I can feel at home only in upholding the ordinary hen of our barnyard. Since coming here my kidnly feeling toward the barnyard hen is increased. I found after two days' experience as a law maker that the state owed me $6 for services while I was in debt $12 for board. I was figuring on a system of bookkeeping for that sort of business, as I wandered over to the poultry show where a few coops of my barnyard hens were on exhibit. My vain calculations were entertained unnecessarily, when on meeting the secretary I was informed that I was forty dollars to the good from premiums won by my barnyard hen and luckily for me only $20 of this had to be collected from the KANSAS FARMER for its special prize for the largest and best display of Barred Plymouth Rocks."

Hon. J. W. Robison, of Eldorado, introduced by Toastmaster Hubbard as the "best all-round farmer in the state of Kansas, and a banker and a plutocrat to boot," responded to the toast, "Railroads, the Stockman's Strong Right Arm—Sometimes." Mr. Robison treated the subject alternately in two different lights: first sarcastically, and then in a serious vein, as he showed how the railroads had been the right arm of the stockmen in the development of the country. It was of interest to them to know that their great-hearted president had come when a boy with his father across the ocean to take part in building one of the first of American railroads. Seventy years ago the senior Robison and his brother, as skilled railroad builders from the old country, had put down one of the first tracks laid across the state of Pennsylvania. "Since then," said he, "see to what our strong right arm has grown. In seventy years, beginning with no experience and comparatively no capital, it has grown to be our most gigantic institution. What must we expect in the next seventy years. Beginning with capital unlimited, the greatest railroad experience in the world, and the most efficient of trained men, to what extent may we not expect our right arm to develop?"

Senator Miller, of Osage County, was called by Toastmaster Hubbard to continue the toast responded to by Mr. Robison. "Your committee," said Mr. Miller," changed my subject before 10 o'clock, and reserved the right to change it any time after 10 o'clock; but instead of that they stole what little I had, and gave me one on which everything has been said. What is there left to finish of anything after J. W. Robison has had hold of it?" Mr. Miller then talked briefly of the many parallel interests of the railroad and stockmen, and of what he considered the best way for the representatives of each to get together.

Private Secretary Allen was next introduced by the master of ceremonies to respond for his principal to the toast, "The Job of Governor." "I can't say," said Mr. Allen, "that the job is so very bad. The governor has a private secretary to make all of his extra speeches and eat all of his supernumerary banquets, or undertake any other job that he is afraid to tackle. The banquet proposition I undertook very cheerfully, but felt a little uneasy on learning that I was expected to address a body of men who knew something about agriculture. I appealed to the governor in my distress, and he passed it off very cheerfully, saying for me to talk to them about the needs of improved methods of farming, of the good that has arisen from the use of pure-bred stock, and any othed likely topic that comes to your mind. But I said Governor, can you give me any hints from your experience that will help me?' To this he said, I could talk on these questions myself. It was my father who introduced into our county the first Polled-Angus horses ever imported. They were very good but difficut to break. The Poland-Chinas we worked were easier broken. In fact, they broke me.' I thought," said Mr. Allen, pausing, that the governor told me more than that but I have forgotten what it was. Anyhow I am sure you will endorse all I have said." Changing to a more popular topic, he said: "I am glad we have prosperity and that we are not allowed to forget it. The atmosphere is full of it. The creeks babble about it. The setting sun paints it on the twilight sky to the wonderment and delight of the farmer boy shucking out the 35-cent corn. The $100 mule brays it to the $50 steer; the steer bawls it to the sheep across the fence, loaded down with its 25-cent wool. The sheep in turn bleats it to the 5-cent pig who has grunted it to the barnyard hen, and she, as she lays her 25-cent eggs, cackles it to the farmer's wife

(Continued on page 126.)

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HEREFORD TOP NOTCHERS.

The Four Days' Sales of Herefords Held at Kansas City Last Week Break All Previous Records.

The Hereford Breeding Fraternity are jubilant over the four days' Hereford sales held at Kansas City last week. It was a great success and broke all records.

The cow Carnation, owned by Clem Graves, of Bunker Hill, Ind., sold to Jesse C. Adams, of Moweaqua, Ill., for $3,700, the highest price ever paid for a Hereford cow. Twelve cows, belonging to Clem Graves, were sold for an average of $796—the highest average ever made on Hereford cows at a public sale. The nineteen cows and bulls sold by Mr. Graves brought an average of $584.21, this being the highest average ever brought at a public sale of cattle, excepting at the F. A. Naves in Chicago last year. The entire 194 head sold during the four days brought an aggregate of $72,935. This makes an average for the entire sale of $375.96—unquestionably the best, not only that ever was made in the pavilion, but, the duration of the sale and the number of animals sold considered, ever made at a Hereford sale in the world.

SOTHAM'S WEAVERGRACE HEREFORDS.

The nineteenth annual sale of Weavergrace Herefords owned by T. F. B. Sotham, Chillicothe, Mo., was held at Kansas City stock yards sale pavilion, on January 22, 1901. It was, as Mr. Sotham stated, "the cleanest sweep of all the best saleable product of Weavergrace Herd that we ever permitted," and was also the first day of four days' offerings by several breeding establishments. The result was satisfactory to Mr. Sotham and exceeded the expectations of a number of other prominent breeders who were in attendance at the sale. Fifty Hereford youngsters sold for the snug sum of $21,160, an average of $423.20; 24 bulls brought $8,745, an average of $364.37; and 26 cows and heifers brought $12,415, an average of $473.30.

The bulk of Mr. Sotham's offering was of the young produce of his herd and included a number of Corrector females bred to his herd bull, Improver. The top price realized for bulls of his own breeding was $655 for Lord Improver 107732 by Improver and out of Lady Coral 68749. This yearling bull went to E. W. Black of Lyndon, O. The top price for bulls was $800 paid for Dale Wilton 105642, a son of the great Dale out of Lady Wilton 67102, bred by B. E. Keyt of Newton, Ind., and sold to Nathan Daugherty, La Grove, Ind. The top notch price for females was $1,080 for the Corrector heifer, Happiness 94012, dam Helen 39088. The next highest priced female was Hebe C 94013, by Corrector and out of Hebe 10th 35420, and went to Clem Graves of Bunker Hill, Ind., for $955.

The detailed report of the sale was as follows:

Cow, Belinda 93976; sold to C. A. Jameson, Peoria, Ill., for $365.

Bull, Warnsing 10774; sold to Adair Hereford Cattle Company, Paladura, Texas, for $275.

Cow, Carlotta 99079; sold to F. A. Nave, Attica, Ind., for $365.

Bull, Londoner 107731; sold to Bartlett Richards, Chadron, Neb., for $295.

Cow, Elma 93988; sold to Wm. Humphrey, Ashland, Neb., for $500.

Bull, Improver's Hesiod 107727; sold to E. B. Clark, Colconda, Ill., for $355.

Cow, Alica 98465; sold to G. W. Black, Lyndon, O., for $505.

Bull, Keepahead 107728; sold to George Austey, Messina, Iowa, for $510.

Cow, Ecstasy 93996; sold to B. F. Glover, Bloomfield, Mo., for $395.

Cow, Floribel 94002; sold to Griff Glover, Bloomfield, Mo., for $360.

Bull, Alton 98466; sold to Bartlett Richards, Chadron, Neb., $300.

Cow, Glisten 94008; sold to F. A. Nava, Attica, Ind., for $710.

Bull, Lord Roberts 107733; sold to Bartlett Richards, Chadron, Neb., for $300.

Bull, Comrade 107718; sold to John Paul, Hatch Grove, Wis., for $350.

Cow, Cornelia 98470; sold to George Redhead, Des Moines, Iowa, for $365.

Bull, Lord Improver 107732; sold to E. W. Black, Lyndon, Ohio., for $655.

Cow, Hebe C 94013; sold to Clem Graves, Bunker Hill, Ind., for $955.

Bull, Halstead 107724; sold to Bartlett Richards, Chadron, Neb., for $300.

Cow, Nonesuch 94033; sold to C. A. Jameson, Peoria, Ill., for $450.

Bull, Alexis 98465; sold to Adair Hereford Cattle Company, for $310.

Cow, Armoura 98467; sold to Egger Hereford Cattle Company, Appleton City, Mo., for $800.

Bull, Prince Prize 107738; sold to Griff Glover, Bloomfield, Mo., for $320.

Cow, Lovelia 94029; sold to S. H. Gadman, Wabash, Ind., for $500.

Cow, Capitola 81621; sold to William Humphrey, Ashland, Neb., for $650.

Bull, Lord Laurel 98473; sold to George T. Rue, Silver City, Iowa, for $450.

Bull, Greatness 98472; sold to W. W. Taylor, Sawyer, Kans., for $380.

Cow, Miss Rusher 86902; sold to James A. Funkhouser, Plattsburg, Mo., for $450.

Bull, Heslarac 107725; sold to G. E. Bedford, Whitesville, Mo., for $365.

Cow, Prunella 98475; sold to F. A. Nave, Attica, Ind., for $400.

Bull, Collector 107717; sold to J. B. Eston, Stanford, Texas, for $305.

Cow, Elsie 98471; sold to George S. Redhead, Des Moines, Iowa, for $305.

Bull, Dexter 107719; sold to P. E. Spellman, Clark, Mo., for $305.

If I had Grip I would use Dr. Miles' Pain pills and Dr. Miles' Nervine.

Sold at All Druggists.

Cow, Red Cherry 107730; sold to Egger Hereford Cattle Company, Appleton City, Mo., for $420.

Bull, Halberd 117050; sold to J. W. Lenox, Lake City, Mo., for $305.

Cow, Cossette 93989; sold to J. S. Kennedy, Yorktown, Iowa, for $505.

Cow, Gladsome 94006; sold to F. A. Nave, Attica, Ind., for $730.

Bull, Horace Improver 107726; sold to M. A. Kelly, Stillwell, Kans., for $305.

Cow, Floss 105262; sold to Col. Rhome, Fort Worth, Texas, for $225.

Bull, New York 105644; sold to Adair Cattle Company, Paladura, Texas, for $305.

Cow, Happiness 94012; sold to Clem Graves, Bunker Hill, Ind., for $1,080.

Bull, Dignity 117051; sold to G. H. Goodman, Wabash, Ind., for $350.

Cow, Electa 107720; sold to C. A. Stannard, Emporia, Kans., for $280.

Cow, Picture 107736; sold to C. A. Jameson, Peoria, Ill., for $300.

Bull, Dale Wilton 105642; sold to Nathan Dougherty, La Gro, Ind., for $800.

Cow, Piquant 11737; sold to George Redhead, Des Moines, Iowa, for $280.

Bull, Prosperity 98474; sold to Bartlett Richards, Chadron, Neb., for $300.

Cow, Caroline 117049; sold to Colonel B. C. Rhome, Fort Worth, Texas, for $220.

Bull, Horace 97208; sold to Bartlett Richards, Chadron, Neb., for $300.

Cow, Doris 93995; sold to A. S. Bent, Hazard, Neb., for $300.

THE RIVERSIDE COMPANY'S CONSIGNMENT.

The Riverside Hereford Cattle Co., of Ashland, Neb., had the largest consignment in the four days' sale, and their consignment of 70 head was sold on January 23 and 24, when 69 head sold for $23,680, an average of $343. Twenty-seven bulls sold for $9,000, an average of $333.35. Forty-two cows and heifers sold for $14,680, an average of $349.50. The Riverside Hereford Cattle Company consists of Wm. Humphrey, who is vice-president and manager; and C. A. Jameson, Peoria, Ill., as president, who owns, besides a herd of 300 head in Indiana. This company owns the largest herd of pure bred Hereford cattle on earth, and is the largest single establishment of any single breed of cattle known. Recently the Riverside Hereford Cattle Company purchased the entire famous Shadeland herd, founded by Earl Stuart, of La Fayette, Ind., which is one of the most famous herds in America. A part of this herd was included in their consignment. The condition of most of their offering was not such as was that of most of the other consignments, yet the averages made were satisfactory to both buyer and seller. The detailed result of their offering was as follows:

The Riverside herd sales of females was as follows: Artful 73642, T. C. Ponting & Son, Moweaqua, Ill., $450; Bangle 83446, Claud Pierce, Belton, Mo., $300; Baroness 93802, J. E. Summers, Huntsville, Mo., $350; Bess 93083, S. H. Godman, Wabash, Ind., $285; Crescent 78709, Frank Rockefeller, Belvidere, Kans., $310; Comedy 73645, S. H. Godman, $425; Erica 53d, Griff Glover, $500; Emblem 89111, S. L. Brock, Macon, Mo., $400; Erica 49th 41236, Geo. Leigh, Aurora, Ill., $275; Artless 83444, S. H. Godman, $410; Erica 64th 46343, A. F. McCarty, Humboldt, $295; Fireside 89112, J. P. Aspen, Danford, Texas, $355; Helen 68470, Griff Glover, Bloomfield, Mo., $275; Joan 93815, Frank Rockefeller, $400; Judith 93816, Minier Bros., Craig, Neb.; Lady Earl of Shadeland 1st 105239, T. H. Pugh, Carthage, Mo., $325; Lady Earl of Shadeland 2d 105240, Frank Rockefeller, $280; Lady Earl of Shadeland 3d 105241, T. F. B. Sotham, $300; Lady Earl of Shadeland 5th 105520, Clarence Dean, New Market, Mo., $300; Lady Earl of Shadeland 7th 105522, Frank Rockefeller, $300; Lady Earl of Shadeland 8th 105223, Frank Rockefeller, $260; Hilda Britton, W. G. Hughes, Hughesville, $195; Lady Wilton 74th 68474, T. H. Pugh, $450; Loretta 89114, Aspen, Texas, $380; Madrona 73658, Clem Graves, Bunker Hill, Ind., $575; Minuet 83452, B. B. Alken, Halstead, Kans., $345; Mistletoe 93822, Frank Rockefeller, $355; Murmur 73660, S. H. Godman, $300; Erica 7th 51346, and calf, F. J. Gabbert, Dearborn, Mo., $1,275; Pearl of Shadeland 93828, J. A. Funkhouser, Plattsburg, Mo., $300; Primrose 93830, S. H. Godman, $275; Ruby 93832, Klaus Bros., Bendine, Kans., $275; Shadeland Essie 58396, Griff Glover, $315; Sunbeam 89116, C. E. Whittlesitch, Bedford, Iowa, $360; Vesta 83455, S. H. Godman, $350; Flora Alamo 83720, S. H. Godman, $270; Michaline 99026, Klaus Bros., $260; Pansy 94205, S. H. Godman, $325; Gloria 2d 94474, Clem Graves, $560; Ethel 8th 106147, W. G. Hughes, $250; Lizzie Admiral 106180, J. P. Aspen, $255; Sunshine 106218, B. C. Rhome, Ft. Worth, Texas., $190 ;Gussie Admiral 106156, J. P. Aspen, $245.

The Riverside bull were as follows: Aristocrat 93800, M. S. Sutton, Russell, Kans, $305; Arlington 93801, S. H. Godman, $850; Checkmate 93805, H. J. Clark, Craig, Neb., $410; Earl of Wea 93810, S. H. Godman, $385; Gold Bug 83451, Minier Bros., $550; Gold Dust 73653, E. F. Whiteley, Douglass Station, Mo., $605; Goldenrod 105238, W. H. Barom. Caldwell, Kans., $190; General Miles 93811, S. H. Godman, $300; Kipling 93817, W. T. Hewitt, Leavenworth, Kans., $220; Lottery 93819, D. D. Kies, Panora, Iowa, $370; Marlborough 93820, Capt. T. B. Watkins, Quannan, Texas, $250; McKinley 93821, H. G. Clark, $170; Monitor 93823, M. S. Sutton, $350; Napoleon 105242, W. G. Hughes, $205; Prince Charming 95249, J. Hickman, Dreth, Nebr., $325; Shadeland Boy, 112433, Griff Glover, $190; Shadeland's Pride 93836, B. B. Alken, $285; Soldier 93837, A. M. Carnahan, Riverton, Nebr., $510; Sound Money 93839, A. Hickman, $330; Sir Edwin 95250, W. T. Hewitt, $200; Stuart of Shadeland 6th 105527, Capt. Watkins, $275; Stuart of Shadeland 8th 105529, J. B. McCrary, Highpoint, Iowa, $300; McKinley 61117, S. H. Godman, $280; Pauline's Tom 94207, $205, Sir Java 94218, $325, to C. A. Stannard; Wishable 78858, T. F. B. Sotham, $300.

EGGER CATTLE COMPANY CONSIGNMENT.

The consignment of the Egger Hereford Cattle Company, of Appleton City, Missouri, consisting of 25 Herefords, all sired by their herd bull Chillicothe 58545, the best son of Corrector. This offer was the first public appearance in the auction ring for this herd, and the cordial reception which they received was both encouraging and flattering. The offer was quite uniform as to scale, smoothness, depth, and quality of flesh. The 25 animals consigned brought $8,150.00, an average of $326.00, 12 bulls averaging $418.75, and the cows and heifers $239.61. The sales in detail are as follows:

Leander 91191, Fred Perkins, Oswego, Kans., $230; Cherry Real 95620, F. H. Carrothers, Ryan, Iowa; Peter Fowler 91197, C. A. Stannard, Emporia, Kans., $225; Magic 95628, G. P. Ashcraft, Webb City, Mo., $255; Lord Castle 95624, C. A. Stannard, $285; Manager 95629, C. A. Stannard, $265; Fleming 102892, C. A. Stannard, $205; Advance 95617, Capt. Watkins, Quannah, Texas, $280; Mogul 95031, Capt. Watkins, $235; Lord Chief 95625, Adair Hereford Cattle Co., Palo Duro, Texas, $305; Excelsior 95525, Bartlett Richards, Chadron, Neb., $175; Ventriloquist 95636, Capt. Watkins, $230; Quaker 102901, Capt. Watkins, $155.

The sales of Egger Hereford Cattle Company's females were: Gally Edwards 66077, Clem Graves, Bunker Hill, Ind., $300; Gipsy 71301, S. H. Godman, Wabash, Ind., $500; Millie 71313, S. H. Godman, $900; Phoebe 81197, S. H. Godman, $525; Lady Comely 81185, S. H. Godman, $400; Luella 81189, S. H. Godman, $525; Hill's Real 81178, Jones & Son, Comiskey, Kans., $525; Sylvia 2d 86300, S. H. Godman, $325; Countess Dunsmore 4th 86290, A. S. Bent, Hazard, Neb., $330; Isabel 91190, S. H. Godman, $300; Countess Cadogen 2d 102888, Griff Glover, Bloomfield, Mo., $205; Beatrice 95618, Griff Glover, $200.

THE DALE CONSIGNMENT.

Plucky Clem Graves, of Bunker Hill, Indiana, with his consignment of 19 head, which sold for the snug sum of $11,100, an average of $584.21, in which 12 females made an average of $796, and 7 bulls made an average of $220. The average made on his entire offering was the highest average in Kansas City for any breed, and the best average ever made on Hereford females at auction, beating the Nave's great sale in 1900 at Chicago. In view of the nerve and courage displayed by this young giant of the Wabash, it is gratifying to chronicle his success on this occasion, in view of the discouragements he encountered in showing the great Dale at Kansas City. He now feels that Kansas City is the best place on earth. The detailed result of his sales is as follows:

The purchasers of "The Dale" Hereford females consigned by Clem Graves, Bunker Hill, Ind., were as follows: Carnation 77704, to Jesse C. Adams, Moweaqua, Ill., for $3,700; Lucretia 69213, T. J. Carrothers, Ryan, Iowa, $550; Pearl 40289, and b. c., Griff Glover, Bloomfield, Mo., $350; Fedora 41045, and c. c., A. S. Bent, Hazard, Neb., $500; Sparkle 99903, T. J. Carrothers, $205; Lady Shadeland 102363, T. J. Carrothers, $200; Augusta 2d, and c. c., Griff Glover, $300; Lovely Lou 99278, C. A. Jamieson, Peoria, Ill., $210; Beatrice 102622, F. L. Brock, Macon, Mo., $515; Columbia 76779, and c. c., Jesse C. Adams, $1,000; Lassie 76019, and b. c., T. J. Carrothers, $700; Columbia 2d 86594, Jesse C. Adams, $1,325.

The purchasers of bulls were as follows: Sir Percival 100494, for $240; Gavin 100491, $235; Courier 105969, $205; Fairford 100488, $205; Grant 102489, $245; Armour 95047, $210; Sherman 102499, $205. This entire consignment of bulls was bought by H. G. Clark, Craig, Neb.

MAKIN BROTHERS, CONSIGNMENT.

Makin Brothers, of Lee's Summit, Mo., formerly of Kansas, had a splendid consignment of 3 bulls and 7 cows and heifers. Ten head sold for $2,940, an average of $294. The bulls averaged $305, and the females $279.30. The offer was quite creditable, and the results satisfactory, as will be seen by the detailed sales, which were as follows:

The purchasers of Makin Bros.' consignment of cows and heifers were: Beauty 5th 87676, and b. c., C. S. Bullard, Creston, Iowa, $360; Prairie Flower 3d 87630, Griff Glover, $300; Miss Pearl Juryman 2d 77227, and c. c., T. F. B. Sotham, Chillicothe, Mo., $400; Buttercup 2d 97574, C. L. Bullard, $300; Miss Rose 97575, T. I. Minier, Craig, Neb., $165; Pride 4th 107373, Clem Graves, $200; Marie Anxiety 3d 116241, T. F. B. Sotham, $300.

The bulls sold as follows: Regulator 97576, Capt. O. B. Watkins, Quannah, Texas, $450; Chief Judge 2d 116239, C. A. Stannard, $280; Judge Vincent 2d 116240, H. G. Clark, Craig, Neb., $185.

A. F. McCARTY'S CONSIGNMENT.

A. F. McCarty, of Humboldt, Kans., made his first annual public auction on Friday afternoon, January 25, when 2 heifers and 4 bulls sold for $736, an average of $120.66. The females averaged $200, and the young bulls $132.50. The sales were as follows:

The McCarty consignment sold as follows: Bulls, Paris 105817, T. F. B. Sotham, $100; Calvin 105614, Sotham, $100; Elwin 104445 for $175, and Beckjay 2d 104678, to H. G. Clark, Craig, Neb., for $155. The heifers, Blanche 12th 81600 D. L. Hueston, Chanute, Kans., $125; Midget 70823, H. G. Clark, $75.

GEO. W. DEMIS' CONSIGNMENT.

Mr. Geo. W. Demis, of Cisco, Mo., had a small consignment of 6 young animals, all of his own breeding except one, the 6 head selling for $1,020, an average of $170. The bulls averaged $190, and the females $150. The sales were as follows:

Young Shadeland 87102, bull, Howard Lathrop, Anador, Kans., breeder, $265; Dandy L 105305, bull, H. G. Clarke, $180; Granger 106947, bull, T. F. B. Sotham, $125; Juanita 91039, cow, J. F. K. Carrothers, $150; Pauline 105307, Clem Graves, $165; Oleander 105518, cow, Clem Graves, $135.

JESSE C. ADAMS' CONSIGNMENT.

Mr. Jesse C. Adams, of Moweaqua, Ill., had a small consignment of 5 head—1 bull and 4 cows. The 5 head sold for $2,555, an average of $511. The bulls sold for a thousand dollars, and the females averaged $388.50. Mr. Adams was brought into great prominence at this sale by reason of his paying $3,700, the highest price ever paid for a Hereford at auction, for Clem Graves' show heifer, Carnation. Mr. Adams is quite a young man, and was prominent as a buyer of top notch Herefords at the sales last year. His consignment sold as follows:

Duke of Sunrise 109701, bull, Clem Graves, $1,000; Grace 109674, Clem Graves, $200; Blendress 2d 110385, J. F. Carrothers, $525; May Queen 104615, J. F. Carrothers, $325; May Flower 101651, J. F. Carrothers, $505.

D. W. Black, of Lyndon, Ohio, had 2 bulls consigned, which sold as follows: But Cut 3d, A. W. Bristow, Cheyenne, Wyo., $305; Gudgel 112648, W. S. Van Natta & Son, Fowler, Ind., $600.

Geo. B. Connelly, of Marshall, Mich., consigned the bull Kansas King 87089, which sold to S. H. Godman, Wabash, Ind., for $200.

THE SATURDAY EVENING POST

An Illustrated Weekly Magazine Founded 1728 by Benj Franklin

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By General Charles King

Some of the Hazing Tactics of the Past

Tales of the Banker
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Former Comptroller of the Currency; stories and reminiscences of bank life.

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A splendid story of college life.

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Keeps you posted.

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THE SATURDAY EVENING POST sent to any address for Three Months (13 weeks) on Receipt of Only 25 Cents. Also, two little books: "The Making of a Merchant" and "The Young Man and the World."

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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
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This is a genuine offer made to introduce the Peoples Cream Separator in every neighborhood. It is the best and simplest in the world. We ask that you show it to your neighbors who have cows. Send your name and the name of the nearest freight office. Address
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Plants, shrubs, etc., are smooth and healthy; no dangerous insects ever found in the state. They are propagated and grown in the most thorough manner. We sell them to farmers and tree planters at a low price through our catalogue, which is free for the asking. Send for it to-day and save agents' large commissions. We pay the freight. Address
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POULTRY NETTING AT CUT PRICES.

We sell poultry netting of all kinds and wire fencing at the manufacturers' lowest prices and prepay the freight. Write for our Free Wire Fencing Catalogue before placing your order and SAVE NEARLY ONE-HALF IN PRICE. Address SEARS, ROEBUCK & CO. CHICAGO, ILL.

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

RATS DRIVEN AWAY ALIVE FOREVER. No traps, no poison. Our new discovery; they never come back. Recipe with instruction, 10c. A. Gallatin Co., York, Pa.

Berkshire Breeders' Big Combination Sale.

On February 16, 1901, the leading Berkshire breeders of the week will hold a combination sale at the Kansas City stock yards salve pavilion ,under the auspices of the American Berkshire Association. The Kansas Farmer submits herewith what each breeder has to say about his consignment to the sale ,which is as follows:

GENTRY'S CONSIGNMENT.

N. H. Gentry, Sedalia, Mo.: The five young sows I contribute to the Kansas City sale, February 16, 1901, are all choice ones and from the best of breeding from ancestors, all of which have proven themselves prolific and first class breeders. I did not have them to spare, but in order to help make up the number necessary for a sale I put them in.

HALL'S CONSIGNMENT.

Fred W. Hall, Falls City, Neb.: The four boars I have consigned to the public sale to be held at Kansas City, February 16, 1901, are show pigs and like their great sire, Baron Duke XX 48291, who has taken first prizes wherever shown, including the Nebraska State Fair.

Baron Duke XX 48291, sire of my consignment, is a very creditable son of Hiawatha 34245, a full brother to Baron Lee IV 33446, the greatest boar ever bred by that noted breeder, N. H. Gentry.

The boars are good enough in breeding and quality to head any herd.

MORRIS' CONSIGNMENT.

John Morris, Chillicothe, Mo.: The five young sows are not only well bred, but have the up-to-date type of the Berkshire so much in demand by our best breeders.

These sows are well marked, with heavy hams and good backs, and are in the right condition to ensure the best results as brood sows. In breeding this lot of sows will compare most favorably with the best, as they have the blood of the most noted sires of Mr. Gentry.

STANNARD'S CONSIGNMENT.

C. A. Stannard, Emporia, Kans.: I have selected twenty head of the very best young things on my farm for the sale. Included in this lot are fifteen choice sows, bred and safe in pig, and there is not one in this grand lot of sows that I would not gladly retain on the farm for breeding purposes, had not the pressure been so great from the committee to assist in making up the desired number for the second of the series of combination sales to be continued at Kansas City .

I have selected five of the very best young boars from my fall litters which will be just right for service in the spring. Every animal catalogued for the coming sale is a good one, and will be sold without reserve to the highest bidder for cash.

In breeding this is the best lot I have ever placed in a public sale or offered at private sale, and they are as good individually as their superior breeding will warrant.

HOUK'S CONSIGNMENT.

James Houk, Hartwell, Mo.: The five young sows are good in quality and breeding, are equal to the best. This is certainly a nice bunch of sows with breeding to suit the most critical. They are all sired by that grand boar, Baron Duke XVIII 48274. One of the sows is out of Golden Charmer XVI 46335, two are out of imported Oxford Duchess 30460, and two are out of Oxford Duchess A II 50608, by the greatest of all sires, Baron Lee IV 33446.

Baron Duke XVIII 48274 is equal to the best in breeding, and for style and quality is all that could be desired. He cost me $126 in cash when a pig.

This lot of sows are in good breeding condition, not fat but just right to suit breeders, who want the best results in the way of large strong litters.

MAJOR'S CONSIGNMENT.

W. W. Major, Kearney, Mo.: My consignment to the Kansas City sale will include sows sired by Baron Lee IV 33446, Baron Lee of Oxford 51593, a son of Baron Lee IV 33446, Stately King Lee 44547, a son of King Lee II 29801, one of the best sons of the noted Longfellow 16835. The dams of the Berkshires I have selected for the sale are equally as well bred, being by such famous sires as King Longfellow 36379, Baron Lee IV 33446, Longfellow W. 33611, and King Lee II 29801.

This lot of Berkshires are in the most desirable condition to ensure a full measure of usefulness in raising large, strong litters of pigs. Breeding list will be furnished on day of sale. Attention is invited to the breeding and foot notes of the animals composing my consignment as published in the catalogue.

MAYES' CONSIGNMENT.

D. F. Mayes, Knoxville, Mo.: The five pigs I have consigned to the public sale to be held at Kansas City, February 16, 1901, are equal to the best in my herd, and some of them I would much prefer to have retained. Believing that the Berkshire hog is destined to win favor over all other breeds, and that breeders should advertise them to the best advantage, by putting into public sales only their choicest animals, I have acted accordingly. I think the good Lord could have made a better hog than the Berkshire, but He never did. I send five that will do the purchaser good.

MILLS' ANNOUNCEMENT.

C. G. Mills, Pleasant Hill, Mo.: My three sows have a large infusion of the blood of the noted Longfellow on the side of both sire and dam.

The sows have been bred to that great boar, Prince Broadback 42837, used with such excellent results in the noted herd of C. A. Stannard, of Emporia, Kans.

CHAPPELL'S CONSIGNMENT.

M. W. Chappell, Minden, Neb.: The two gilts we have placed in the Kansas City sale of February 16, 1901, are good, strong, useful sows, of our own breeding that we consider up to the high average of our herd in style, form and the up-to-date make up of our herd. We have made it a rule in purchasing boars and sows for our herd to select stock that would mature early, make the best cross for feeders, and good enough in quality to be sought after by the leading breeders.

SUTTON'S CONSIGNMENT.

Chas. E. Sutton, Russell, Kans.: The boar and sow I have consigned to the public sale at Kansas City, February 16, 1901, are very creditable specimens of the breed. Parties desiring to put a strong infusion of the best English strains from late importations will be favorably impressed, not only with the breeding, but the quality of my consignment.

Attention is invited to the extended pedigrees and foot notes of my consignment published in the catalogue.

HARRIS & McMAHAN'S CONSIGNMENT.

Harris & McMahan, La Mine, Mo.: Every animal consigned to the Kansas City sale is a good one and their breeding will compare most favorably with any in this country. We have never used an animal that was not a good individual of the best pedigree and a first class breeder. They will be presented in nice breeding condition ,not overdone, but in shape to promise the best results to the buyer. They have had the run of a forty acre pasture all their lives, and have been fed liberally on corn and pumpkins, never having had any slop until the first of January. We are now feeding them some slop made of ship stuff, and they have continued to improve since taking them off of grass and pumpkins.

We guarantee every animal a breeder if properly handled by the purchaser. We have concluded not to make a show the coming season and have put in this sale all the animals heretofore reserved for exhibition in 1901. They are all young, and in the best of health and vigor, and can prove useful breeders with fair treatment.

POLLARD'S CONSIGNMENT.

J. T. Pollard, Fulton, Mo.: Baron Lee XXI 55160, the boar I have consigned to the Kansas City sale, to be held February 16, 1901, was sired by Baron Lee IV 33446, the greatest boar ever bred by that great breeder, N. H. Gentry ,of Sedalia, Mo.

His dam, Black Girl XLII 36394, was out of a daughter of the noted Longfellow 16835, and her sire, Lee Duke II 23852, is a son of the great Model Duke 17397.

KING'S CONSIGNMENT.

June K. King, Marshall, Mo.: My entire consignment to the sale was sired by that great sire of matchless breeding, King's Longfellow 50303, a most creditable descendant of Old Longfellow on the side of his sire, and the famous boar, Col. Mills 31712, was the sire of his dam.

The dams of the grand lot I nave selected for this sale are by such noted boars as Wood Dale Star 44500, a son of King's Longfellow 50303, Col. Mills 31712, a son of the noted Columbus 28701, Lord Ross 36805, a son of imported Enterprise 26461, and Baron Lee IV 33446, the greatest boar bred by that matchless breeder, Hon. N. H. Gentry, the well known proprietor of Wood Dale Herd .

Not the least of the attractions of this handsome lot of sows will be their prospective litters by a grand individual by Lord Premier 5001, and out of Charmer XLVIII 33453, recently purchased from the Wood Dale Herd of Mr. Gentry.

The Next Hereford Sale.

The next Hereford sale, on Thursday and Friday, February 7 and 8, representative cattle, consisting of 45 bulls and 75 cows and heifers, will be held at the Kansas City sale pavilion. A select and reputation making offering from the herds of Steele Brothers, Belvoir, Kans.; E. A. Eagle & Son, Rosemont, Kans.; E. Corkins, Bethany, Mo.; and Miller & Balch, Kirksville, Mo., will be made.

The consignors to this sale are well known as careful and reliable breeders, and are anxious to make a reputation for their herds by putting into the sale the very best animals which they have produced, and it certainly will be as good an opportunity for buyers as will be had this year.

A perusal of the pedigrees will show that the breed is all that any practical man could desire. For a catalogue for the entire combination, address Steele Brothers, Belvoir, Kans.

STEELE BROTHERS.

The prospective buyer will find the cattle individually as good as they are bred. Our aim in breeding is for greater size, without sacrificing quality. As a promoter to this end we feed a ration of oats bran, and corn-meal, with an abundance of alfalfa hay for roughness—the alfalfa being a substitute for oil-meal.

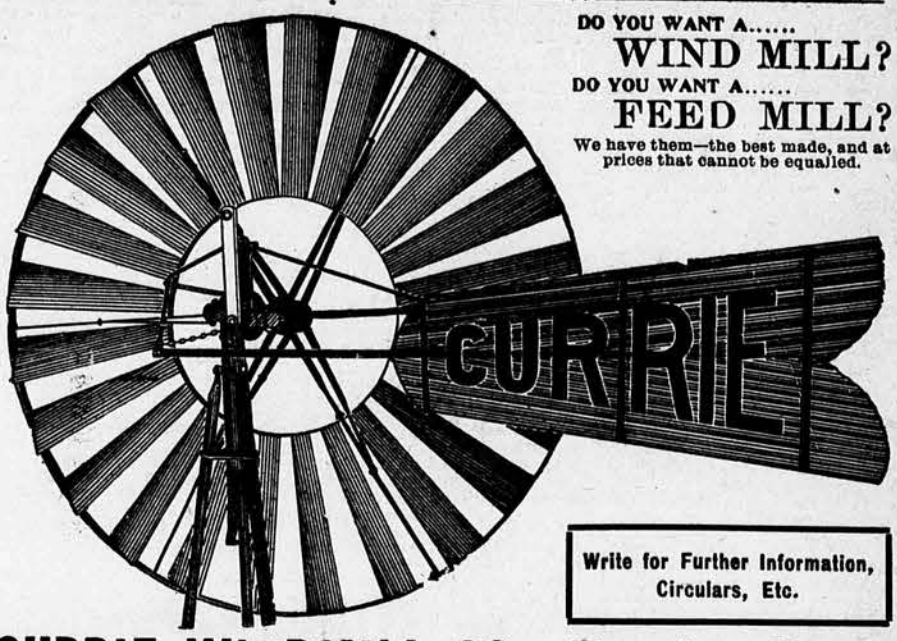
Fifteen of the 20 bulls offered will be over 1 year old. They are a strong lot of broad backed, square ended fellows, well grown, with splendid coats and good colors: They have had the run of a ten acre lot for exercise every day, keeping them good on their feet. Ten are sired by McKinley 68926, seven by Ben Butler 54079, and three by Princeps. Among the outstanding good ones are lots 11, 15, and 25 of catalogue, by McKinley, lots 19 and 35 by Ben Bulter, while Princeps has two prime ones in lots 30 and 32.

The 20 heifers will be found a very desirable lot of well grown, deep fleshed individuals, eleven being sired by Princeps, seven by McKinley, one by Ben Butler, and one by North Star. Twelve of these have been bred to the Armour bull, Kalitan ,and one by Princeps. Among the choice ones might be mentioned Dimple, lot 13, by McKinley, she being a full sister to Miss Plutarch 3d, shown by us in 1899, taking first and sweepstakes at Ottaaw, Kans., and seventh in class at the National Show at Kansas City, and sold in the combination sale.

E. Corkins, of Bethany, Mo., will include a very choice offer of fourteen 4-year-old cows, all in calf to McCord 3216 or Lomax 8993. Several of the cows will have calves at foot at the time of sale. The bull offering will include the herd bull, Lomax, and the bull Bootwan 2d, both from top bulls. His offer also includes three of his show heifers that were prize winners at the National Hereford shows at Hamlin and Kansas City.

Miller & Balch, owners of the Kirksville herd founded in 1892, will include in their consignment from their herd of 100 head a very choice lot, in which there is comingled the blood of Lord Wilton, The Grove 3d, Horace, and Anxiety 4th.

E. A. Eagle & Son, Rosemont, Kans., make their first offering from their herd, which was founded in 1896. They are putting into this sale some animals they are quite reluctant to part with, but are anxious to give buyers a chance to see the class of stock which they are breeding. Among the bulls are Brewster, by North Star, Dean, by Jara 64045, and Banker, by most attractive herd bull, Leroy 64896. The mos tattractive bred female is Curly Coat 116594, by Gudgel 94011. While the offering is not large, the catalogue reveals a splendid line of breeding that should sell at a fair figure.



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We have them—the best made, and at prices that cannot be equalled.

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SEED CORN "Pride of Nishna," Yellow, "Iowa Silver Mine," White.

"PRIDE OF NISHNA" is a bright yellow dent, 16 to 24 rows, deep grain solidly set on small red cob, maturing soundly in 90 days. It was grown in 38 states in 1900. Thousands of farmers grew from 80 to 100 and 120 bushels of shelled corn per acre in all parts of the corn belt "IOWA SILVER MINE" white, is the full counterpart of it, with white cob Price for either variety $1.00 per bushel, bags free aboard the cars here. FULL descriptive catalogue FREE for the asking. A 56-page Illustrated catalogue, and "BOOK ON CORN GROWING" with samples of seed for TWO RED STAMPS to pay postage. WRITE TO-DAY.

Address, J. R. RATEKIN & SON, Shenandoah, Iowa, naming this paper.

Ayrshire Cattle Breeders.

The Ayrshire Breeders' Association held its annual meeting at Gould's hotel Wednesday afternoon, January 16. There were about 75 members and breeders present. Pres. L. S. Drew was in the chair. The treasurer's report showed a balance of $4,211.36 in the treasury.

The following officers were elected: L. S. Drew, of South Burlington, Vt., pres.; Obediah Brown, of Providence, H. R. C. Watson, of New York, John Stewart, of Elburn, Ill., and Thomas Trumbull, Jr., of Alleghany, Pa., vice-pres.; C. M. Winslow, of Brandon, Vt., sec. and editor; J. O. Magie, of Elizabeth, N. J., and S. M. Wells, of Wethersfield, Conn., executive committee for three years.

C. M. Winslow, Thomas Trumbull, Jr., and J. W. Scott were appointed a committee to prepare a home dairy test for a year for herds of five cows.

The president and secretary were appointed a committee to arrange for a model dairy at the Pan-American exposition at Buffalo, provided suitable Ayrsnire cows could be obtained by loan from the owners ,the association bearing expense of transportation, etc.

Remarks were made by F. A. Converse, superintendent of live stock at the Pan-American exposition. It was voted to hold the next annual meeting at Providence, R. I., the third Wednesday of next January.

Stock Gossip.

D. L. Dowdy & Co. have recently bought the Riverdale farm, near Arrington, Atchison County, Kansas. It is located one-half mile from the town, and contains over 500 acres, and will be devoted to the raising of pedigreed stock. Everything on the farm, even to the cats, will be thoroughbreds.

Don't fail to observe the announcements made by Sam W. Hill, of Hutchinson, Kans., concerning his Poland-China hog sale to be held on February 19, 1901, and to consist of thirty-two bred sows ,ten serviceable boars, and forty fall pigs, also two splendid herd boars, Guy Darkness 18292 and Perfection Chief 24978. Write for catalogue.

J. J. Hedrick's sale of 100 high grade Herefords at Arrington was a very successful sale, the price averaging from $40 to $45 per head. The attendance was the second largest of any sale ever held in Atchison County. Col. J. N. Harshbarger, of Lawrence, was master of ceremonies, and has the credit of making this such a successful sale.

Mr. W. O. Park, of Atchison, Kans., owner of the Osborn Farm Herd of Aberdeen-Angus cattle, offers a very fine lot of high grade stock for sale, including steers and high grade cows and heifers, 100 calves, hogs, etc. The sale will be held at the farm near Holton, Kans., but for further particulars address W. O. Park, Atchison, Kans.

Cor-Sul Cattle Dip ,advertised by Moore Chemical & Manufacturing Co., of Kansas City, is a product of great value to all cattlemen and has the strong endorsement of leading cattlemen who have tried the same. The advertiser thoroughly understands his business and is thorougnly reliable and deserves liberal patronage. Notice the special advertisement in this issue.

Last week Senator W. A. Harris sold the Linwood farm, one of the most famous breeding farms in America, to George Adams, of Denver, Col., who owns the best equipped ranch in Colorado, located at Crestone. Mr. Adams intends to place at once upon this farm 150 very select Herefords. It will be in charge of his manager, Mr. Geo. Morgan, who is well known to Hereford breeders. At the time of making this sale the entire farm herd of Linwood Shorthorn cattle, some 30 head, were bought by H. C. Duncan, of Osborne, Mo., and W. S. Van Natta, of Fowler, Ind.

The International Stock Food Company

CAST IRON CHIMNEY CAP

Will preserve your chimneys for years. 18 x 18 and 13 x 22, $1.50, cash with the order.

Castings in Brass or Gray Iron Models and Patterns

TOPEKA FOUNDRY
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USE IT IN YOUR GARDEN.

"THE EASY"

Costs Little. Does Much.

The easiest-running, handiest garden tool in the world.
Ask your dealer for it, or write
WYETH HDW. CO., St. Joe. Mo., or
EASY CULTIVATOR ...CO... Independence, Missouri.

PIGS BORN.... CHOLERA PROOF.

RIDGWAY'S

New Scientific Discoveries

IMMUNIZE PIGS BEFORE BIRTH through the mother's blood
IMMUNIZE PIGS AFTER BIRTH through the mother's milk.
IMMUNIZE OLDER HOGS by a different process.
CURES SICK HOGS by flushing and cleansing the bowel and entire system
HAS BEEN TESTED on over 20,000 hogs the past year.
HAVE AT MY OWN EXPENSE shipped into various states and exposed in cholera hundreds of my own pigs for weeks and months without harm and will continue to ship and expose on same terms.
HAVE SOLD TO OVER 2,500 of the best farmers and breeders in the United States.
DISCOVERED five years ago, was tested four years before offering to sell it.
LETTERS PATENT pending on all the above processes
ALL INFRINGERS and their customers will be held responsible for damages.
BEWARE! of Logansport or other infringing companies.
AGENTS WANTED, WRITE the originator and rightful owner,
ROBERT RIDGWAY, Amboy, Indiana.

has a very attractive and interesting advertisement this week. This is the largest stock food factory in the world. And the manager said to the Kansas Farmer representative at the Minnesota state fair that their enormous business had been obtained by reason of the merits of International stock food ,and proper business methods. Any of our readers who secure a copy of their three thousand dollar stock book will be very well pleased with it. Be sure to mention the Kansas Farmer when writing them.

Attention is directed to the page advertisement of a combination Hereford sale, to be held at Kansas City, February 26, 27, and 28. The consignments in this sale are from the renowned herds of C. A. Stannard, Emporia, Kans.; Scott & March, Belton, Mo.; Gudgel & Simpson, Independence, Mo.; W. S. Van Natta & Son, Fowler, Ind. A Kansas Farmer representative has visited some of these herds and looked over some of the offerings, and will have something of interest to say in next week's issue. In the meantime the story of the breeding in detail is well told in the Catalogue, which may be had upon application to Gudgel & Simpson, Independence, Mo.

The public sale of imported and American Herefords, the offering mainly of Armour-Funkhouser, will be held at the Kansas City stock yards sale pavilion on February 19 and 20, 1901. Readers of the Kansas Farmer will remember the splendid lot of cattle sold in their last sale, and will not forget that they pledged to offer as grand a lot of cattle at this sale. The catalogue tells the whole story in a very convincing manner, and intending purchasers should not fail to note their announcement, and secure a catalogue at once. Four imported bulls and 16 imported cows, as good as any of the Armour importation, will be found among the offering. The Riverside Hereford Cattle Co., who had such a successful sale last week, will include in this sale 10 head, part of the same offering which sold at such attractive figures last week.

Mr. Lewis Annan's public sale offering of fifty head of good and useful well-bred Shorthorn cattle, to be made at Clarinda, Iowa, is one to attract no small bit of attention in this day of excellent values in all good breeding stock of all the standard beef breeds. Mr. Annan's sale occurs at his farm adjoining the town of Clarinda, this old farm being one of the early landmarks of the county. Date of sale being February 12. It is practically a dispersion sale, since Mr. Annan must quit the farm for one year at least for the benefits of travel and change of scenery and climate upon other members of his family. There are about forty females in the Annan offering. No pretense has been made toward fitting them into high sale condition. Mr. Annan declares that they shall be presented to buyers in absolutely useful condition, and we agree with him that this would make amends for any lack of finish in the fitting up. And yet this fact is in favor of the buyer always, and against the seller. There will be plenty of material in the younger classes to give Mr. Annan's cows a high rating as producers. Some good young things will be sent forward on sale day, in both heifers and bulls of these useful sorts, to plead the case of the man who drives straight ahead every day of the year. It is to be kept in sight that Mr. Annan's great Cruickshank herd bull, Baron Favorite, a son of the renowned imported Baron Cruickshank, is a big factor in the offering. It is his get that will grace the sale ring at Clarinda on February 12, and this richly bred bull, just coming to his prime, will also stand for what he is worth under Col. Wood's hammer at this time. Mr. Annan will be glad to supply all with catalogues who ask. Please mention Kansas Farmer when you write for one. It is to be noted that buyers can attend the Moffit sale at Shennandoah next day at no expense to them. Read both advertisements.

The Moffit & Priest closing out sales of Shorthorn cattle and Poland-China swine at Shenandoah, Iowa, on Wednesday and Thursday, February 13-14, is an event that well may appeal to the enterprising breeders of Kansas. There are few better opportunities for securing such desirable stock as may be had here. There are no more profitable herds in the state of Iowa, and now that it is settled that they must be dispersed, Kansas stockmen should not fail to take the distinct advantage of buying at this time. If there is a better herd of brood sows and younger sows than that to go under the hammer at Shenandoah in February, it would be difficult to say where it is. They are the kind that have good bone, good and well rounded backs, good legs and feet. They are well bred, as catalogue shows; they raised fine litters of pigs last spring, and every boar sold at a good price. We can not make the proposition strong enough to fit this fine herd of brood sows. Seventy-five head are catalogued. The cattle are likewise a splendid business proposition for the buyer. It has been a strong list of sires doing service in this Iowa herd, Imp. True Briton and Scotchman being the last in line and still in the herd and to be included in sale. A Kansas Farmer representative was very recently out to see the cattle that he might be able to tell the readers of this paper the exact status of affairs. If the fine strings of young cattle to go into this sale ring at Shenandoah are to tell the story of the fruitfulness of the herd and of the good service of Scotchman, it will certainly be forcefully told. In numbers and quality they are a very strong lot. The cows in the herd are to be rated high for the good scale they present and for their remarkable producing capacity. It is what is known popularly as an excellent working herd of Shorthorns. The catalogue presents a fine lot of young and well grown red bulls, all the get of the Cruickshank bull, Scotchman. As Mr. Moffit says, it will certainly be a golden opportunity to add to a man's herd some of these cows that are yearly producing these lusty young bulls. When there is a possibility that such cows may sell below the price of their calves alone, it behooves buyers to be on the alert. The outstanding attractions in the sale will be the sixteen daughters of Imp. True Briton, nearly every one of them being of breeding age, some with calves at foot and others right up to their calving. They are among the best of the breed. No such array of True Briton females ever went under one hammer in a single day. Scotchman is a great breeding bull and will stand on his merits. Come to the sale. See advertisement. Write for catalogue yet.

Publishers' Paragraphs.

Mr. R. M. Kellogg, of Three Rivers, Mich., offers to send his pamphlet, "Great Crops of Small Fruits and How to Grow Them," free to every reader of the Kansas Farmer who will ask him for it.

It is generally believed by those who know that the "Nulite" incandescent vapor gas lamps and arc illuminators produce the finest artificial light in the world. Those of our readers interested will receive full information by addressing the Chicago Solar Light Co., at 56 Fifth Ave., Chicago. Mention Kansas Farmer.

Reliability is of the utmost importance in the purchase of trees and seeds. It's a waste of money to buy the kinds that won't grow. The Storrs & Harrison Company, Painesville, Ohio, who have been in the business almost half a century, enjoy an enviable reputation for accuracy and honesty, and any of our readers in want of anything in the nursery line should send for their valuable catalogue, for which no charge is made.

The Currie Windmill Company, which has recently moved from Manhattan to Topeka, is making a special bid for the spring business in steel windmills. They now have ample quarters, having more than doubled their capacity for making both steel windmills and Kaw feed grinders. Being located on one railroad track and accessible to three other competing lines they can guarantee all freight charges to be the lowest. If you are needing a new windmill, drop them a line and get their new catalogue, free. See their advertisement on another page of this issue.

The Easy Garden Cultivator Co., of Independence, Mo., whose advertisement begins this week in the Kansas Farmer, makes the following claims for the implement it makes, a cut of which appears in their advertisement on another page: "It runs easy because the pulling force goes direct to the wheel instead of to the shovel. Its highly tempered steel springs make the plow run at an even depth instead of jerking in and out of ground. The adjustable handle, by means of a wedge-shaped slot, is instantly lowered or raised to suit man or child. By the use of different attachments weeds can be cut and raked away, ground plowed, clods broken, ground harrowed, or furrows made or filled. With expansion handle two of the single-wheel plows are readily turned into a double plow for cultivating both sides of a row at once. With it a child can do the work of a man.

In this issue of the Kansas Farmer appears the nineteenth annual statement of the Kansas Mutual Life Insurance Company, of Topeka, Kans. This is essentially a Kansas institution in the sense that all their investments are in Kansas real estate first mortgages and their office is located in Kansas. But in the matter of insurance written it has long since outgrown the confines of any particular state. The surplus, which is the barometer of an insurance company's progress, has shown a healthy growth during the past year and is now over $165,000, or nearly one-third of the total assets. With a total of over ten million in insurance written it has long since passed the experimental stage and is to-day reckoned as one of the safest companies doing business anywhere in the West. All their available funds are invested in farm first mortgages in the eastern third of Kansas, where they can be looked after by the company at a minimum of expense and without paying a commission to others to make the investments. This enables them to realize the highest possible net rate of interest, which is the cause of such a satisfactory showing in the surplus fund.

Owing to the deep interest taken in the Davenport "Wireless" planter by farmers generally, the country over, we know that they will be interested to learn that the Implement Mfg. Co., of Davenport, Iowa, the enterprising and aggressive makers of this planter, are again in the field in full force, full of that vigor and vim that characterized their campaign last spring. We wish to call your attention to their advertisement, appearing in this issue. While it is true that they had a terrible experience last season, an experience that cost them an amount equal to the value of a dozen of the best and largest firms in Iowa or Illinois, we feel justified in indorsing both the concern and its product and in calling our readers' attention to this matter. When the highest authorities on utility and practicability of farm tools in the country, the Iowa Agricultural College of Ames, Iowa, also the State Farmers' Institute of Minnesota, voluntarily and unconditionally indorse the Davenport "Wireless," we feel as though we could not be far wrong in doing the same. Knowing, as we do, that the affairs of the Implement Mfg. Co. are managed by practical business men who are not in business for their health only, it is absurd to think that they would risk a repetition of their last season's experience. That they willingly and pleasantly carried out every agrement made last season, is sufficient evidence of good faith on their part and that a guarantee issued by them is something more than mere words. It has developed that 90 per cent of the farmers using the "Wireless" last season with partial success, now freely admit that they themselves were to blame for their seeming failure. The fact that a farmer who has once used a "wireless" would never go back to the use of a wire machine, is sufficient reason why you should investigate it carefully and insist on your dealer ordering one for you. If he absolutely refuses to do so then write to the company. Write to them anyway for circulars, descriptive of the 1901 improvements. Address the Implement Mfg. Co., Department E, Davenport, Iowa.

"Grip made me very weak and nervous with tightness of chest and headache. Dr. Miles' Pain Pills and Nervine gave me quick relief."—Mrs. Clarinda Butler, W. Wheeling, Ohio.

GEO. M. NOBLE & CO.,

501 Jackson St., Topeka, Kans.

For Sale or Trade....

One-half interest in the Syracuse Flouring Mill and Elevator, Syracuse, Kansas.

It consists of a 50-barrel, Brick, Full Roller Process Mill, with Corn Meal attachments; 20,000-barrel Elevator, in three bins; two large Warehouses. A first-class business. The remaining partner is a thoroughly practical miller; the reason for desiring to sell, family reasons. A desirable trade for property in or near Topeka, or some good eastern Kansas town.

We have for sale 485 acres of choice land within 2 and 2½ miles of the city limits, at a remarkably low price. Can be sold in one tract or in three tracts of 140 acres, 185 acres, and 160 acres. No such opportunity in the vicinity of Topeka. This land can be bought because of peculiar circumstances for much less than a fair valuation. People desiring to locate near Topeka can find no better opportunity. Citizens of Topeka desiring to make a safe investment that will surely prove profitable can do no better. These tracts can be sold at farming land prices, and yet they give all the benefit of suburban homes, with finest location and situation. This will repay investigation.

We have for sale a cattle ranch between Dodge City and Garden City, on the Arkansas River and on the A. T. & S. F. Ry., 1,200 acres of the very best bottom land, with four miles of river front on one side of the river, and two miles on the other side, a fenced pasture enclosing a tract four miles east and west, and seven miles south from the river; and three miles east and west and six miles north from the river—finest of pasturage. The bottom land has several hundred acres of alfalfa fields and other cultivated land. There is a good house, barns, wells, pumps, fine orchard of 25 acres, fine fish and irrigating ponds near the buildings; everything that can be desired for a cattle ranch. Will repay investigation.

We have a pasture of 3,300 acres in Morris County.

We have a pasture of 2,040 acres in Chase County.

We have a pasture of 1,040 acres in Elk County.

We have a number of sections in Hamilton and Finney and Kearney counties, besides farms and pastures in most of the counties of the state.

For further particulars write the above firm.

NINETEENTH ANNUAL STATEMENT OF

The Kansas Mutual Life Insurance Company

January 1, 1901.

ASSETS.

First Mortgages on Real Estate, Bonds, Loans on Policies Assigned, and other Assets	$486,783.05
Cash in Banks	38,498.61
	$525,281.66

LIABILITIES.

Policy Reserves (Actuaries' 4 per cent interest)	$337,615.62
All other Liabilities	21,985.27
Total	$359,600.89
Surplus to Policy Holders	165,680.77
	$525,281.66

GAINS MADE IN 1900.

Gain in Surplus	$5,758.15
Gain in Income	$55,220.71
Gain in Assets	$89,255.52
Gain in Amount on Deposit with the State	$99,681.07
Gain in Insurance in Force	$507,460.00
Total Assets January 1, 1901	$525,281.66
Surplus to Policy Holders	$165,680.77
Paid Policy Holders in Death Claims, Dividends and Surrender Values to January 1, 1901	$1,482,687.29
Insurance in Force, January 1, 1901	$10,720,944.08

JOHN P. DAVIS, Pres. W. M. WELLCOME, Vice-Pres. JOHN E. MOON, Sec.
F. J. THOMAS, Asst. Sec. J. S. HYMAN, Supt. of Agents.
R. T. HERRICK, Counsel. G. J. MULVANE, Medical Director.

BOARD OF DIRECTORS.

Hon. E. N. Morrill. John R. Mulvane. John P. Davis.
W. M. Wellcome. John E. Moon.

ADVISORY BOARD.

C. J. Devlin, Wholesale Coal Operator, Topeka; Lewis W. Lewis, Emporia; Howard Dunlap, Pres. Emporia Savings Bank, Emporia; Chas. S. Gleed, Attorney and Director A. T. & S. F. Ry., Topeka; T. B. Sweet, Pres. Trust Co. of America, Topeka; Jonathan Thomas, Lumber Merchant, Topeka; E. Wilder, Treas. A. T. & S. F. Ry., Topeka; J. V. Andrews, Pres. Merchants' Bank, Kansas City, Kans.; General J. K. Hudson, Topeka; Geo. M. Noble, Vice Pres. Trust Co. of America, Topeka; Hon. W. E. Stanley, Governor; Chas. Wolff, prop. Wolff Packing Co., Topeka; K. L. Browne, Cashier Merchants' Bank, Kansas City, Kans.; L. W. Keplinger, Attorney at Law, Kansas City, Kans.; J. S. Parks, ex-State Printer, Beloit; H. E. Ball, Treas. City Real Estate Trust Co., Topeka; P. I. Bonebrake, Pres. Central National Bank, Topeka; R. E. Torrington, Dist. Freight Agent, A. T. & S. F. Ry., Wichita; Willard N. Hall, Hall Litho. Co., Topeka; Geo. W. Crane, Law Publisher, Topeka; R. P. Murdock, Manager Wichita Eagle, Wichita; Joab Mulvane, Capitalist and Farmer, Topeka; James A. Troutman, ex-Lieut. Gov., Topeka.

☞Reliable, Energetic Solicitors Wanted. Address Home Office, Topeka, Kansas

MARKET REPORTS.

Kansas City, Jan. 28.—Cattle—Receipts, 7,295; calves, 268. The market was slow anu steady to weak. Representative sales:

SHIPPING AND DRESSED BEEF STEERS.

No.	Ave.	Price.	No.	Ave.	Price.
20	1532	$4.90	1	1532	$4.90
14	1374	4.85	20	1158	4.85
21	1307	4.50	21	1129	4.70
2	760	4.25	18	1221	4.50
WESTERN STEERS.					
20	1243	4.55	40	1306	4.85
75	769	3.95	123	993	4.10
50	970	3.85	111 stk	837	3.85
2	790	3.00	53	999	3.85
COLORADO STEERS.					
37 stk	565	4.25	39 stk	567	4.20
38 stk	636	4.20	3 stk	563	3.50
3 stk	633	3.50	3 stk	566	3.50
SOUTHWEST STEERS.					
15 stk	507	3.70	11 cvs	323	4.10
99 cvs	325	4.10			
IOWA STEERS.					
27	530	3.40			
OKLAHOMA STEERS.					
24 stk	762	4.35	20 fdr	970	4.25
4 fdr	957	3.50	3 stk	860	3.25
3 stk	736	3.25	1	860	3.00
TEXAS AND INDIAN STEERS.					
22	1210	4.40	50	1175	4.15
27	1153	4.25	26	955	4.10
75	913	3.80	53	1034	3.90
20	796	3.70	23	924	3.85
MINNESOTA STEERS.					
65 stk	673	3.65	26 stk	660	3.65
26 stk	690	3.90	41 stk	879	3.65
NATIVE HEIFERS.					
29	696	4.00	2	1190	4.00
1	990	4.00	1	920	3.75
1	890	3.80	2	675	3.75
NATIVE COWS.					
2	1050	3.40	3	1116	3.50
3	1113	3.25	11	1134	3.40
2	1035	2.90	4	825	2.85
2	840	2.50	3	836	2.75
NATIVE FEEDERS					
40	1100	4.40	46	961	4.40
14	1100	4.40	37	967	4.40
6	943	4.25	1	1000	4.15
22	1003	4.00	14	944	4.00
WESTERN COWS.					
10	782	3.55	36	902	3.50
17	943	2.60	1	680	2.60
TEXAS AND INDIAN COWS.					
20	793	2.90	56	813	2.90
4	802	2.90	2	875	2.75
NATIVE FEEDERS.					
62	639	4.75	14	483	4.60
55	841	4.42½	20	854	4.35
6	795	3.75	2	715	3.70
7	483	3.50	5	704	3.40
STOCK COWS AND HEIFERS					
2	950	3.50	1	590	3.40
10	718	3.30	2	570	3.25
1	680	3.25	5	900	3.00
1	680	3.00	1 spg	1240	2.75

Hogs—Receipts, 883. The market was strong to 5 cents higher. Representative sales:

No.	Av.	Price	No.	Av.	Price	No.	Av.	Price
59	360	$5.40	60	295	$5.32½	51	280	$5.32½
79	272	5.30	69	250	5.30	71	265	5.30
91	219	5.25	76	224	5.25	23	200	5.25
83	205	5.22½	85	188	5.22½	47	228	5.22½
90	78	4.35	39	98	4.00	44	110	4.32½
25	80	4.25	2	170	3.75	77	107	4.00

Sheep—Receipts, 4,299. Sheep were steady to strong and lambs 10 to 20 cents lower. Representative sales:

558	Col.lms	61	$5.25	515	W.lms..	69	$5.10
280	W.lms..	64	5.10	559	W.lms..	74	5.05
9	cl.lms..	58	4.25	23	sheep...	95	4.15
5	cl.sh....	136	2.50	24	stk.....	91	2.90

Chicago Live Stock.

Chicago, Jan. 28.—Cattle—Receipts, 21,000. Good to prime steers, $5.10@6.00; stockers and feeders, $3.00@4.50; Texas fed steers, $4.00@4.75.

Hogs—Receipts, 25,000. Mixed and butchers, $5.10@5.32½; bulk of sales, $5.20@5.27½.

Sheep—Receipts, 20,000. Good to choice wethers, $3.75@4.50; western sheep, $3.80@4.50; western sheep, $3.80@4.50; native lambs, $4.25@5.50.

St. Louis Live Stock.

St. Louis, Jan. 28.—Cattle—Receipts, 4,000. Beef steers, $4.30@5.80; stockers and feeders, $2.50@4.60; Texas steers, $3.45@4.60.

Hogs—Receipts, 7,000. Pigs and lights, $5.15@5.25; butchers, $5.25@5.35.

Sheep—Receipts, 1,200. Muttons, $3.75@4.50; stockers $2.00@3.25.

Omaha Live Stock.

Omaha, Jan. 28.—Cattle—Receipts, 2,100. Native beef steers, $4.00@5.40; western steers, $3.70@4.60; Texas steers, $3.00@3.75; stockers and feeders, $3.30@4.50.

Hogs—Receipts, 4,800. Heavy, $5.20@5.25; bulk of sales, $5.22½.

Sheep—Receipts, 4,100. Yearlings, $4.50@4.80; lambs, $4.75@5.35.

Chicago Cash Grain.

Chicago, Jan. 28.—Wheat—No. 2 red, 75@77c; No. 3, 73@75c; No. 2 hard winter, 71½@72½c; No. 3, 70@72½c; No. 1 northern spring, 75@77c; No. 2, 73@76c; No. 3, 65@74c. Corn—No. 2, 37¼@37½c; No. 3, 37c. Oats—No. 2, 24¼@24½c; No. 3, 24@24¼c.

Futures: Wheat—January, 73⅝@73¾c; February, 73¾c; May, 76⅛@76¼c. Corn—January, 37¼c; February, 37⅝c; March, 38⅜c. Oats—January, 23⅞@24c; May, 25¼@25⅜c.

St. Louis Cash Grain.

St. Louis, Jan. 28.—Wheat—No. 2 red cash, elevator, 73⅜c; track, 74½@75¼c; No. 2 hard, 70½@71½c. Corn—No. 2 cash, 36½c; track, 37¼@37½c. Oats—No. 2 cash, 26c; track, 26@26¼c; No. 2 white, 28½c.

Kansas City Grain.

Kansas City, Jan. 28.—Wheat—Sales by sample on track:

Hard—No. 2, 68@68½c; No. 3, 67@68c.

Soft—No. 2, 68@70c; No. 3, 68c.

Mixed Corn—No. 2, 35¼@35½c; No. 3, 36¼c.

White Corn—No. 2, 36½c; No. 3, 36@36½c.

White Oats—No. 2, 26¼c; No. 3, 25½c.

Rye—No. 2, nominally 48c.

Flaxseed—$1.60.

Prairie Hay—$5.00@8.50; timothy, $6.00@11.00; alfalfa, $7.00@9.50; clover, $7.00@8.50; straw, $4.00@5.50.

Kansas City Produce.

Kansas City, Jan. 28.—Eggs—Fresh, 15½c doz.

Butter—Creamery, extra fancy separator, 20c; firsts, 17c; dairy, fancy, 16c; packing stock, 10½c; northern cheese, 12½c; Kansas and Missouri, 11½c.

Poultry, Hens, live, 6½c; roosters, 15@17½c each; spring chickens, 7c; ducks, young, 6½c; geese, young, 6c; turkey hens, 6½c; young toms, 6c; pigeons, 50c doz. Choice scalded dressed poultry 1c above these prices.

Game—Wild ducks, Mallard, redheads and canvasback, $3.00@3.50 per dozen; mixed, $1.75@2.25; rabbits, 50c; squirrels, 50c.

Potatoes—Home grown, 40@50c; Colorado, 85@90c; northern, 50@60c; sweets, 25@35c bu.

Apples—Fancy, $2.00@3.00 per barrel. Cranberries, $8.00@8.50 per barrel.

Vegetables—Green beans, home grown, 90c@$1.25 bu; tomatoes, California, $2.25 per crate. Navy beans, $2.25@2.30. Cabbage, northern, $1.25@1.50 per cwt. Onions, $1.15@1.35 per bu. Cucumbers, $1.50@2.25 per doz. Egg plant, Florida, $2.00@2.50 per doz. Hubbard squash, $1.00@1.50 per cwt. Celery, 30@65c doz. Cauliflower, Texas, $3.00@4.00.

THE McINTOSH & PETERS

Live Stock Commission Co

EXCHANGE BLDG., KANSAS CITY STOCK YARDS.

They give any bank in Kansas City or Topeka for reference. Furnish market reports to feeders and shippers gratis, and will be glad to furnish any desired information at any time covering their market or its prospects.

Special Want Column

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

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

FARMS AND RANCHES.

FOR SALE—40,000 acre ranch, all enclosed, 75 miles 3 and 4 barbed wire fence, four streams of water run through the pastures, fenced in 6 fields, excellent improvements, splendid shelter; 100 acres in good alfalfa, 450 acres under cultivation, 2 good practical irrigation ditches. See Thos. L. Ross, Room 25, Columbian Bldg. for ranches, farms and city real estate.

FOR SALE—Fine ranch of 880 acres on prong of Marmaton river, Bourbon County, Kansas. Four hundred acres in fine cultivation, balance prairie grass, perennial water. Good barns, scales, cribs, and timber shelter. Large frame farm house, lately new. Two and one-half miles from railroad depot of Hiattville. Reason of sale, sudden total blindness of owner. Value $25 per acre, one-half cash, one-half in 10 years at 5 per cent semi-annual interest. Address E. F. Ware, trustee, Topeka, Kans.

STOCK FARM WANTED—I want for a customer a stock farm of from 400 to 640 acres. Must have fair buildings, fences, and not over 5 miles to railroad station, and not more than 100 miles from Topeka, south or southwest preferred. These parties have about $8,000 in good residence property in Topeka to trade for a stock farm that suits. Will send full description on application. Address, John G. Howard, Land Dealer, Topeka, Kans

REAL ESTATE—ROUDEBUSH.

LANDS FOR SALE—

40 acres, 4 miles from postoffice, good house, barn and other improvements, young orchard, fine neighborhood, close to school, $2,100.

40 acres near Tecumseh, improved, $1,100.

180 acres, highly improved, 6 miles out, bottom and slope land $50 per acre.

240 acres, improved, in Douglas county, poor house, good barn, good orchard, $14 per acre.

240 acres, well improved; 100 acres bottom; $26 per acre.

200 acres, 2 sets improvements, large orchard, 8 acres vineyard. Must be sold before March 1. Might take small amount in trade. Less than $30 per acre.

160 acres, improved, $3,500.

80 acres, Shawnee county, all bottom, fair improvements, $2,750.

20 acres, close to Topeka, new 5 room house, fruit, good water, $1,600.

We can suit you exacily in large farms or stock ranches, improved or unimproved, in eastern, middle or western Kansas.

3,200 acres, in south central Kansas, all fenced, 2,000 barrel reservoir, 160 acres in cultivation near station, $3.50 per acre.

12,000 acres, one body, fine water, $3.50 per acre.

Hotel in county seat doing good business; will take farm as part pay; $6,000.

We have houses and lots in all parts of city as low as can be sold.

If you wish to buy, sell or exchange, or insure your property, see us.

EMMET E. ROUDEBUSH.

'Phone 267. Ground floor, 115 W. 6th Ave.

SWINE.

FOR SALE—Poland-China pigs, $6. G. W. Harman, Ridge, Kans.

FOR SALE—A few very choice Poland-China and Berkshire gilts, bred. Also four young boars. O. P. Updegraff, Topeka, Kans.

PEDIGREED POLAND-CHINAS—No better anywhere; $5 each. M. C. Hemenway, Hope, Kans.

SHEEP.

FOR SALE—220 one-half and three-fourths bred Shropshire ewes, 1, 2, and 3 years old, unbred and in good condition. Cleland & Benedict, Olpe, Kans.

When writing advertisers please mention this paper.

Ship Your Produce Direct.

There is no way to get full value for your produce except by shipping direct to market. The fewer hands the products of the farm passes through before reaching the consumer the more profit there is for the producer.

WE DISTRIBUTE DIRECT TO THE CONSUMER.

We receive and sell

BUTTER, EGGS, VEAL, POULTRY, GAME, FUR, HIDES, PELTS, WOOL, POTATOES, SEED, BROOMCORN, POP CORN, BEANS, HAY, GRAIN, GREEN AND DRIED FRUIT of all kinds, or anything you may have to dispose of. **We Guarantee Prompt Sales and Quick Returns** for all shipments, also full **Market Price and Full Weight.** We guarantee to get you more money for your product than you can get at home. One shipment will convince you of this fact. We are reliable and responsible; you run no risk in shipping to us; have been established here for 27 years. Write us for prices, shipping tags, or any information you may want.

SUMMERS, BROWN & CO.,

COMMISSION MERCHANTS AND RECEIVERS FOR THE PEOPLE,

Reference, Produce Exchange Bank, Chicago, and this paper. 198 S. Water St., CHICAGO.

S. M. WOOD & CO.,

REAL ESTATE AND LOANS.

TOPEKA, KANSAS.

Do you want a Ranch?
Do you want a Farm?
Do you want to sell Farms or Ranches?
Have 4,000 acre Ranch in Elk County, $12.50.
Have 1,040 acre Ranch in Elk County, $12.50.
Have 1,160 acre Ranch in Wabaunsee County, $12.50.
Have 1,800 acre Ranch in Ellis County, $8.
Have 880 acre fine Ranch in Bourbon County, $25.
Have 640 acre Ranch in Hodgeman County, snap at $5.
Have good farms all sizes here and all over Kansas.
Come and see us—we will do you good.

S. M. Wood & Co.

CATTLE.

FULL BLOOD, non-recorded Hereford Bulls at steer prices; coming yearlings, perfectly marked and good individuals, at $40 and $45 per head. Guaranteed as represented, Write at once. A. F. McCarty, Humboldt, Kansas.

FOR SALE—25 high grade Hereford cows with calf. 20 high-grade Hereford heifer calves. Herd bull Hero 68550, 5 registered Hereford bull calves sired by Tom Reed 58617, and one Spanish jack five years old. James A. Carpenter, Carbondale, Kans.

FOR SALE—One extra good Cruickshank Shorthorn bull. H. W. McAfee, Topeka, Kans.

FOR SALE—Registered and high-grade Hereford bulls, 8 to 18 months old. A. Johnson, Clearwater, Sedgwick Co., Kans.

BEING PHYSICALLY UNABLE to care for my stock any longer I will sell my entire herd of Shorthorn cattle consisting of 17 bulls, 3 to 18 months old, and 65 cows and heifers, all ages. This is a snap. Try and see. J. H. Bayer, Yates Center, Kans.

FOR SALE—75 high grade Hereford bull calves, age 7 to 12 months, extra fine; 22 head registered Hereford bull calves, 8 months old; 15 head registered Hereford heifer calves, 8 months old; 12 high grade Hereford bulls, 18 months old; 13 high grade Shorthorn bulls, 18 months old; 50 high grade Hereford heifers, 7-8 to 15-16 bred; 10 registered Shorthorn bulls, 8 to 18 months old; 6 registered Shorthorn heifers, 2 years old, bred; 4 Shorthorn heifer calves, registered, 7 to 8 months old; 10 high grade Shorthorn bull calves. Prices reasonable. This stock is all high grade and registered animals from the best families. Louis Hothan, proprietor, Carbondale, Kans.

BULL FOR SALE—I offer for sale King of the Roses, a 4-year-old Shorthorn bull, deep red, fine breeder. Bred by Hon. G. W. Glick, sired by Winsome Duke 11th, whose portrait appeared December 13 in the Iowa Homestead. King is head breeder and bred in the blue. C. W. Sample, Kingman, Kans.

TWO SCOTCH-TOPPED Shorthorn bull calves sired by Glendower, and out of pure Bates cows. Also a fine lot of B. P. Rocks, both sexes; some nice show birds. I have won more prizes on B. P. Rocks than any other breeder in central Kansas. F. W. Ross, Alden, Rice County, Kansas.

REGISTERED SHORTHORN BULLS—Quality best, prices low. M. C. Hemenway, Hope, Kans.

FOR SALE—Five registered Holstein bulls, also high grade Shropshire rams and ram lambs. E. W. Melville, Eudora, Kans.

HORSES AND MULES.

WANTED—One or two draft stallions, must be cheap. Box 482, Peabody, Kansas.

FOR SALE OR TRADE—for good horses or cattle, the best Percheron stallion in the state, weighs 2100, too heavy for this locality. D. W. Stone, Medicine Lodge, Kansas.

FOR SALE—Two Mammoth jacks, and two Mammoth jennets. W. C. Ward, Linwood, Kans.

FOR SALE—One of my draft stallions. I have one black Percheron, and one large English Shire. Both horses are good individuals and first-class breeders. Also a good black jack. Lewis J. Cox, Concordia, Kans.

FOR SALE OR TRADE—Two black Percheron stallions, and two fine black jacks. Write me, or come and see them. W. Q. Hyatt, Carbondale, Kans.

FOR SALE—The Percheron stallion Beldemeer No. 14927. Black with small star, 10 years old, weight 1850, sired by old Brilliant 1271 (755) (winner at World's Fair). Beldemeer is sound; weighs 1850 pounds, is a fine breeder, a good individual and a great shod horse. Also 2 standard bred stallions. An imported French Coach stallion and Jack. Do not write, but if you want to buy come and see them soon at my barn, 213 West Fifth Avenue, Emporia, Kans. W. H. Richards, V. S.

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

MISCELLANEOUS.

WANTED—at Topeka Seed House, 306 Kans. Ave., customers for our Northern Grown Garden Seeds and field seed corn; also for all kinds of clover and grass seed, can and kaffir and for all kinds of garden implements; also for poultry supplies, poultry foods, oyster shell grits and ground bone We are agents for Cypher's incubators and brooders. Call and see our stock of flowering shrubs, plants and bulbs.

ALFALFA SEED—for sale by the grower, R. T. Jenkins, Kinsley, Kans.

MISCELLANEOUS.

SWEET POTATOES—Furnished to sprout on shares; no experience required; directions for sprouting free with order. Varieties: Golden Queen (early market potato), Red Bermuda, Vineless, Yellow Jersey, Yellow Nansemond. T. J. Skinner, Columbus, Kans.

DOWEN POTATO DIGGER and Aspenwall Planter for sale cheap; in good repair; and 9 money makers for agents. Chas. L. Berry, Mystic, Iowa.

ALFALFA SEED—Attention Farmers: While dealers are getting a corner, preparatory to asking you 15 to 20 cents per pound, take time by the forelock and buy direct from a grower. Write for samples and prices, stating quantity wanted. E. G. Jones, Syracuse, Kans.

ST. BERNARD PUPS for sale. I have a choice litter now on hand. H. Vasper, 113 East 6th Ave., Topeka, Kans.

CHOICE SEED CORN—Early and late. Circular and sample free. J. D. Ziller, Hiawatha, Kans.

WANTED—Alfalfa, Cane, Kaffir-corn. Highest market price. Send samples. Kansas City Grain & Seed Co., Kansas City, Mo.

WANTED—Cane and Kaffir corn in car lots. Send samples and quote prices. McBeth & Kinnison, Garden City, Kans.

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

FALL OR WINTER BARLEY—Seed for sale. I have a very fine quality of this grain for seeding, and it should be tested in Kansas. Price $1 per bushel on cars at Leoti, Wichita Co., Kansas. Address Jerome Boren, Leoti, Kans.

WANTED—Alfalfa, red clover, timothy, English bluegrass, and other grass seeds. If any to offer please correspond with us. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

WANTED—Every breeder in Kansas to become a member of the Kansas Improved Stock Breeders' Association. Send membership fee of $1.00 to H. A. Heath, Secretary, Topeka, Kans., and you will receive the breeders' Annual Report for 1899.

BLOSSOM HOUSE—Opposite Union Depot, Kansas City, Mo., is the best place for the money, for meals, or clean and comfortable lodging, when in Kansas City. We always stop at the Blossom and get our money's worth.

THE STRAY LIST.

Week Ending December 17.

Cherokee County—S. W. Swinney, Clerk.

HORSE—Taken up by George Black, in city of Baxter Springs, Nov. 30, 1900, one black horse, white hind feet, sheared foretop, 9 years old, 16 hands high.

HORSE—Taken up by W. N. Newman, in Shawnee Tp., Dec. 13, 1900, 1 bay horse, 5 feet 4 inches high, white left hind foot, shod all around, 9 years old.

Clay County—J. H. Kerly, Clerk.

BULL—Taken up by Hans Burglund, Dec. 28, 1900, one red bull, 1 year old, V cut in right ear.

Week Ending December 24.

Cherokee County—S. W. Swinney, Clerk.

MARE—Taken up by C. J. Stephens, in Lowell Tp., 1 sorrel bald-faced mare, mane worn with collar, left hind foot white, about 14 hands; valued at $25.

Woodson County—J. P. Kelley, Clerk.

STEER—Taken up by H. Lanber, in Belmont Tp., Dec. 17, 1900, 1 roan steer, 1 year old, dim brand on left hip; valued at $18.

Week Ending January 31.

Graham County—R. S. Garnett, Clerk.

MARES—Taken up by Albert Heisel, in Solomon Tp. (P. O. Morland), Jan. 19, 1901, two bay mares, 4 feet 6 inches high, white stripe in forehead of each, one with two white hind feet, one with one white hind foot; valued at $40.

Montgomery County—D. S. James, Clerk.

MULE—Taken up by H. F. Messersmith, in Fawn Creek Tp., Nov. 29, 1900, one mare mule, black, about 10 years old, about 14 hands high, tip of one ear split; valued at $20.

KANSAS IMPROVED STOCK BREEDERS' ASSOCIATION.

(Continued from page 121.)

putting the last pat on her 25-cent butter. She tells it to her daughter, who straightway goes to town and buys a fur coat and a new piano." Mr. Allen followed this bit of illustration with one of the prettiest pieces of word panting and pure sentment, that delighted the whole audience, and which brought forth prolonged applause as he took his seat.

"I will introduce to you," said Toastmaster Hubbard, rising "a man whose soul is as warm as the genial sun at the Kansas noon day, yet his name is John Frost, who will talk to you of 'The Outlook for 1904.'"

Mr. Frost's response was a brief, energetic outline of the work of the Kansas Exposition Company and a hopeful prediction for its success.

"The Legislature, Our Forlorn Hope," was the toast to which Hon. J. C. Stone, of Leavenworth, responded. "If you expect," said he, "any realization of the hope you place in your legislature it will be necessary to have a greater hand in the making of it. Certainly the live stock interests of this great state should be better represented, and more energetically pushed, than the blackberry interests of the state. They call their ante-election operations horticultural.

"Mirth from the Fun Factory," was the suggestive toast to which Major Tom Anderson was asked to respond, with "a song by the sweet singer of the Modocs." "If Governor Glick would treat me," he said, "as I treated him a year ago, when he was called in a similar emergency, there is a possibility you might get the song, but I do not know where it is. I heard the Governor ask Potter, 'where is it? I do not see it on the "Me and You."' 'It is here,' responded the other, 'it is always in Topeka, but like all other good things, it has to be hid. We will find it though, without having to call on the chief of police.' But despite that assertion it has not been found, and neither will my song be. Of the live stock lore that I have drunk in with hungry ears tonight, but one item seems to have remained with me: the price paid for a Belgian hare. We have long sought hair, and if this new kind will grow on the top of my head I will gladly pay twice the price mentioned."

Mr. Anderson continued turning out sample shakes, and as he sat down, amid the laughter the master of ceremonies arose, and with a few brief wishes for the coming year announced good night for the breeders' fifth annual banquet.

The Live Stock Markets.

The immense volume of business transacted at the leading live stock markets during the year 1900, give some definite idea of the magnitude of the live stock industry of this country.

The year 1900 was a most prosperous one for the grower of all classes of stock because of the prevailing good prices for all classes of live stock and notably so as to the breeder of improved stock.

Very few people have any idea of the magnitude of the live stock industry of the United States. If shown, by official government estimates, that the horses, mules, asses, cattle, hogs, sheep, and goats in the United States number over 140,000,000 head, and that their value is, according to a late estimate by Director of the Census Merriam, approximately, $3,000,000,000, the figures alone would have very little attraction or meaning to the majority of readers. But when told, in addition thereto, that these animals would make a solid column of more than seventy-six abreast reaching from San Francisco to Boston; or, if placed in single file, a solid procession that would reach six times around the earth and require twenty-one years to pass a given point, marching constantly at the rate of twenty miles per day o;r, that would fill a solid stock train of 2,600,000 modern palace stock cars, over 20,000 miles in length; and, further, that their value exceeds the total combined value of all the corn, wheat and other cereals, potatoes, hay, cotton, sugar, molasses, tobacco, lumber, wool, coal, petroleum, silver, gold and precious stones, iron, copper, lead, zinc and other metals produced annually in the whole country; then perhaps some adequate conception may be formed concerning the magnitude and importance of the live stock industry of the United States.

THE CHICAGO MARKET.

The year 1900 has shown a continued marvelous increase of interest in every department of the live stock industry, culminating in the unparalleled success of the International Live Stock Exposition in Chicago, December first to eighth, inclusive, making a fitting close to a century of wonderful progress in live stock development.

Receipts for the year:

No.	Kind.	Valuation.
2,729,046	Cattle	$136,452,300
136,310	Calves	1,622,089
8,109,064	Hogs	96,092,408
3,548,885	Sheep	16,502,315
99,010	Horses	11,485,160
14,622,315	Total	$262,154,272

In Chicago it is shown that 225,000 of Chicago's population get their daily living directly from the business activities of the square mile occupied by her Union Stock Yards ,and another 225,000 get their living indirectly from the same source; that, in fact, the live stock and meat packing industry was the foundation and has always been the chief element of Chicago's wonderful growth and prosperity, and is today her leading industry.

During the nine months since its completion there have been held in the new Dexter Park Amphitheater 14 auction sales of pure-bred cattle, embracing each of the four leading beef breeds, at which 985 head were sold for $353,615, or a general average of $359 each. The sum realized from these 14 sales equals one-half the total auction sales of pure-bred cattle in the United States during 1899, and the average is about $150 per head greater.

The following tables show the results of the sales for each of the four breeds of cattle sold at auction in Dexter Park Amphitheater, Union Stock Yards, Chicago, from March to December, 1900:

SUMMARY.

	No. Head	Aggregate	Average
Herefords	361	$136,785	$378.91
Shorthorns	352	113,190	321.56
Angus	172	75,745	440.38
Galloways	100	27,895	278.95
Total	985	$353,615	$359.00

COWS.

	No. Head	Aggregate	Average
Herefords	237	$ 87,230	$368.05
Shorthorns	240	75,805	315.85
Angus	135	59,390	439.93
Galloways	57	14,775	259.21
Total	669	$237,200	$354.56

BULLS.

	No. Head	Aggregate	Average
Herefords	124	$ 49,555	$399.64
Shorthorns	112	37,385	333.79
Angus	37	16,355	442.03
Galloways	43	13,120	305.11
Total	316	$116,415	$368.40

Highest priced cows sold were:

Hereford, "Dolly 5th"	$3,150
Shorthorn, "Mayflower 5th"	2,600
Angus, "Lucia Estill"	2,800
Galloway, "Eunice of Weavertree"	755

Highest priced bulls sold were:

Hereford, "Dale"	$7,500
Shorthorn, "Star of the North"	1,800
Angus, "Black Knight of Estill 9th"	2,100
Galloway, "Druid of Castlemilk"	1,200

Three times during the year of 1900, record breaking sales were made in Dexter Park Amphitheater, the first being the dispersion of the Wallace Estill herd of Aberdeen-Angus cattle on March 22 and 23, when seventy-two head brought $41,725, or an average of $579.51 each; the second being the dispersion of the Fairview herd of Hereford cattle by Mr. F. A. Nave, of Attica, Ind., April 17 and 18, in which ninety-six animals sold for $64,415, an average of $671 each, and the third sale being that of the celebrated W. D. Flatt herd of imported Shorthorns, August 7, in which fifty-nine animals brought $46,825, or an average of $793.64 per head. Each sale establishes a record for the respective breed.

During 1900 also, in Dexter Park Amphitheater, there has been sold at special auction sales 1,644 high class coach horses and thoroughbreds of all ages, at prices ranging from $150 to $7,800 for single animals, and fancy teams bringing as high as $9,500 to $12,000 each, these sales aggregating over $420,000. Prices have averaged better than ever before. The increased demand is met by a great scarcity of good horses. The brilliant horse shows of the season, notably the phenomenal success at the Coliseum in November, and the attractive exhibitions and spirited sales in the Dexter Park Amphitheater, have done much to create a lively demand for choice horses, and breeders and trainers who have produced the right kind find themselves in clover these times.

THE KANSAS CITY MARKET.

During 1900 the aggregate business done at the Kansas City stock yards has been vastly greater than in any previous year. The business of 1899 was the high-water mark up to that time, but that of 1900 surpasses it. With long, rapid strides Kansas City is moving forward to her rightful position at the head of the live stock markets of the world. In 1899, 117,355 cars of stock were received there. The receipts for 1900 were 129,203, or almost 12,000 cars larger.

The largest cattle, calf and horse receipts on record for a year, the third largest hog receipts, the fifth largest sheep receipts—that is the story of the year's receipts at Kansas City.

It was a great year and the total receipts passed 6,140,000, considerably above 1899.

The slaughter of cattle and calves reached and exceeded 1,100,000 head for the first time on record, or over 100,000 in excess of any previous year. Hog packing was also about 200,000 head over 1899 and might easily have been 1,000,000 greater had the supplies been forthcoming. Sheep slaughter ,owing to light receipts, was behind some previous years. The percentage of arrivals killed, however, was the greatest the past year.

Shipments of stockers and feeders were just above the high mark set in previous years and varied only a few thousand from the previous big year, which was 669,105 in 1899.

Along with this growth of business has occurred an increase in the stock yards' capacity for handling business. The yards cover 180 acres, and are ,all things considered, the best in the world. During the past year practically the entire horse and mule trade of the city has been moved to the West bottoms ,and $500,000 is now invested in buildings for carrying on this business alone. The exclusively horse barn cost $100,000, and is the best building of its kind on earth. When the year 1900 opened, a large proportion of the local horse and mule trade was carried on on South Grand avenue, but at about this time the Kansas City Stock Yards Horse & Mule Company was organized, and through its efforts most of the proprietors of up-town yards have been induced to move to the yards. The year's horse and mule business have been almost twice as large as that of any previous year, and Kansas City now stands among horse and mule markets second only to St. Louis.

The greatest and most significant increase, however, has been in the receipts of cattle. Kansas City has become, within the year, the real center of the cattle business of America. In 1899, 1,931,747 head of cattle were received here. In 1900 the receipts were 1,966,467. The greatest increase in receipts has been from Oklahoma, Indian Territory, southern and western Texas, and Kansas. The increase in receipts from Oklahoma alone has been more than 25,000.

It is anticipated that the cattle business of 1901 will more greatly exceed that of 1900 than did that of 1900 that of 1899. Cattlemen were never so thoroughly awake to Kansas City's advantages as a market as they are now. The show and sale which were held at the stock yards last fall under the auspices of the American Shorthorn and Hereford associations drew thousands of breeders and feeders here from all sections, and especially from the West and Southwest, a territory which naturally belongs to Kansas City. In past years failure to appreciate the advantages of shipping here caused many feeders and breeders to send their products further East. This mistake they will not continue longer to make.

The hog business shows a growth proportionately as great as that of the cattle business. The receipts of 1899 were 3,014,923; those of 1900 were 3,084,665, an increase of almost 70,000 head. It is not difficult to find out where the additional swine came from, for the receipts from Texas during the year were 15,000 larger than in 1899, from Oklahoma 37,000 larger, and from the Indian Territory 34,000 larger, while Kansas sent in 1,094,401 as compared with 1,013,218 in 1899.

The receipts of calves during 1900 were 112,559 as compared with 105,579 during 1899. The receipts of sheep show a slight decline, the number which came in being but 860,417 as compared with 950,286 in 1899.

The greatest events of the year at the yards were the show and sales of Shorthorn and Hereford cattle in October. The show lasted almost two weeks, and thousands of cattle fanciers from every section of the United States were present. During

17.70 16.85 For 12-16 BALL BEARING. All steel disc harrow, easiest running and best made. 8 sizes, discs 16 or 20 in. in diameter. 12-16 La Dow Disc Harrow, $16.85. Evaners extra.

$6. For 16 tooth Spring Tooth Harrow. Has steel guard and draw bar. Also 18 and 20 tooth at reduced prices.

$6.90 for steel lever harrow; cuts 10 ft; 64 teeth, 2 sections; also 3 & 4 sections.

$9.40 For 14 in. double shin all steel plow. Guaranteed to scour. 12 in. 8.40; 16 in. $10.80. Get the best.

$2.40 Buys this Steel Beam Cultivator, plain, with 5 shovels. Spreads to 53 in.

$2.90 for this hay carrier. 40 ft. outfit with pulleys, hangers, floor hooks, rope, fork. Everything complete, $9.00. Any length furnished.

$1.15 for No. 2 farm bell. Wt 50 lbs. Diameter 17 in. Also church and school bells. All sizes.

$6.50 For garden drill. With drill and 11 cultivator attachments and 250 page book on gardening $8.50 Send for free catalog with full terms; 95 styles seeders and drills to pick from.

$10.75 Buys 2 horse, 4 shovel cultivator. 15 styles, riders and walkers to select from. OUR CATALOG is full of things you need on the farm. All kinds of harness repairs, carpenter tools, etc.

$3.50 The Champion grinds 6 ft. sickle in 10 minutes. Grinds heel and point same time. With one stone for sickle; $3.50; with two stones for grinding all kinds of tools, $3.75.

75 cts. buys this No 81 BABCOCK CORN PLANTER The best hand planter on the market for the money. Other styles at reduced prices.

Send for our FREE 328-Page Agricultural Catalogue, Marvin Smith Co., 55-57-59 Jefferson St., Chicago, Ills.

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BLACK • LANGSHANS.
30 cockerels, score 92 to 96¼, and 40 pullets, score 92 to 96¾, for sale.
J. C. WITHAM, - - Cherryvale, Kansas.

FOR SALE—S. C. B. Leghorn, C. T. Game, W. Wyandotte and W. Plymouth Rock. H. C. Stanley, Rose Hill, Butler Co., Kans.

WANTED—Men with rig to advertise and introduce Monarch Poultry Mixture. Straight salary $15 00 weekly and expenses. Address with stamp, Monarch Manf. Co., Box 459, Springfield, Illinois.

FOR SALE—M. B. Turkeys, large boned, well marked and healthy. Write to Emma Anno, Colony, Kas.

M. B. TURKEYS, BARRED PLYMOUTH ROCKS at prices to move them, farm raised from prize winning stock. 15 years a breeder. M. S. Kohl, Turley, Kans.

FOR SALE—High-class poultry, stay-White P. Rocks and B. P. Rocks from A. C. Hawkins, Mass.; Light Brahmas, with fine dark points, and . C. B. Leghorns, fine in shape and color; price $1 to $3. Adam Rankin, 2222 Main st., Quincy, Ill.

I HAVE 250 AS FINE B. P. ROCKS as can be found east or west; can furnish pairs, trios and pens, no kin; they are bred right and can not help but breed right. One litter of COLLIE PUPS ready to ship now. Satisfaction guaranteed. W. B. Williams, Box 142, Stella, Neb.

FOR SALE—Mammoth Bronze turkeys, both sexes, 41-pound tom at head of herd. Eggs in season. Barred Plymouth Rocks, both sexes. Eggs in season. Edwards & Parker, Kinsley, Kans.

40 BRONZE TURKEYS sired by a 40-pound tom. Two separate pens. Write for prices. Address, Mrs. Fred Cowley, Columbus, Kansas.

FOR SALE—Pure-bred Barred Plymouth Rocks, B. B. Games, and White Holland turkeys. Mrs. Porter Moore, Box 541, Parsons, Kans.

WHITE WYANDOTTE COCKERELS—$1.00 each. White Holland turkey cockerels $1.50. "Your money back if you want it." Darby Fruit Co., Amoret, Bates Co., Mo.

POULTRY.

B P ROCKS, AND COLLIE DOGS—Early hatched cockerels, very large and finely marked, and some yearling hens and a few cock birds. Two fine litters of Collie puppies. One fine male pup 2 months old from imported Royal Lassie's litter left. To secure bargains write at once. W. B. Williams, Box 142, Stella, Neb.

BUFF COCHINS—Cockerels $1. M. B. turkeys $2 if taken soon. A. B. Mull. Iola, Kans.

WHITE HOLLAND TURKEYS—Toms and hens; pairs and trios. Barred Plymouth Rocks, Pekin ducks. Prices reasonable. J. C. Curran, Curran, Kans.

PURE-BRED WHITE AND BARRED PLYMOUTH ROCKS.
200 early-hatched Cockerels and Pullets for sale.
Cockerels.....$1.00 to $3.00.
Pullets.....75c to $2.00.
No better birds anywhere at any price, Write for descriptive circular.
T. E. LEFTWICH, Larned, Kansas.

Standard Poultry.
Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Buff Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, S. C. Brown Leghorns and Belgian Hares. First Class Stock of Standard Birds of Rare Quality. Fine Exhibition and Breeding Stock. Write Me Your Wants. Circulars Free.
A. H. DUFF, Larned, Kans.

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56-page Illustrated Poultry Catalogue. The secrets of successful poultry raising told in plain language; all about incubators, brooders, poultry houses, how to hatch and raise every chick, what, when and how to feed, forcing hens to lay and hundreds of valuable subjects contained in no other catalogue. Tells of 35 varieties popular thoroughbred fowls and quotes extremely low prices. Send 4c in stamps for postage. Hollyhock Poultry Farm, Box 1429, Des Moines, Ia.

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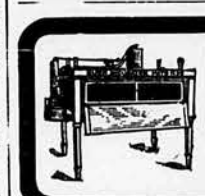
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BELGIAN HARES FOR SALE.
Pedigreed stock, healthy, and good in every particular. Correspondence solicited.
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The Sure Hatch
is a high grade incubator at a low price. Thousands in use. California red-wood cases and copper tank incubators at the price others ask for common pine and galvanized iron. Our brooder broods as well as our hatcher hatches. Handsome catalog giving plans for practical poultry houses, yards, etc., free. Write to-day. You need it in your poultry business.
Sure Hatch Incubator Co.,
Clay Center, Neb.
We pay the freight. The Sure Hatch will pay your rent, taxes, and living expenses. Thousands in use, thousands of pleased customers.

its progress its popularity with the people of the city grew rapidly, and during the last ten days the gigantic tent in which it was held was crowded with the best people of the city. The interest it excited paralleled that aroused by the horse show, which occurred immediately afterward.

The sales were the first ever held in the new fine stock pavilion, and the average prices brought helped to more firmly establish Kansas City's position as one of the best places on earth in which to sell pure-bred cattle. In the amphitheater on the days of the sales were the wealthiest and most prominent fine cattle fanciers in the country, and the bidding throughout was exciting. The prices paid made a good average. One hundred and forty-four head of Shorthorns brought an aggregate of $45,635, an average of $316.90; and 185 Herefords, $59,625, an average of $320.16. The highest price of the sale was $5,055, which was paid by Frank Rockefeller, of Belvidere, Kans., for Benton Gabbert's young bull, Columbus XVII. The next highest was $1,025, which was paid by C. B. Smith, of Fayette, Mo., for the Hereford cow, Saint Justina. Knight Valentine ,a Shorthorn bull, brought $1,000.

But the best average yet made at a sale in the pavilion was that of the Armour-Funkhouser sale of Herefords, which occurred about the middle of December. The offering was made up from the herds of K. B. Armour, of Kansas City, and James Funkhouser, of Plattsburg, Mo., and 106 head were sold for $37,270, an average of $351.60. Another big combination auction was the Bothwell-Nettleton sale of Shorthorns, which immediately followed the Armour-Funkhouser sale.

The success of the cattle show in 1900 was so great that the local stock yards men have already put on foot plants for creating an "American Royal" show, which shall be held annually in Kansas City. They hope to interest breeders and fanciers of all kinds of live stock in the scheme. They have already presented their plans to the breeders of Galloway, Angus, Shorthorn and Hereford cattle, and within the next few months sheep, hog and Angora goat breeders will be invited to prepare exhibits.

Greater gains during 1900 were shown in the horse and mule market during the past year, than in any other branch of the live stock industry. The receipts for the year at the stock yards, as compared with 1899, show an increase of over 250 per cent. This percentage of increase is more than three times as great as that made at any of the other markets. St. Louis, the nearest rival in this matter, shows an increase of only 20 per cent. This growth is phenomenal and even those most directly interested are surprised at the magnificent showing.

Receipts of horses and mules combined for the past year were 118,023 head. These figures include 103,308 head received at the stock yards and 14,715 head received at the Grand avenue market. Receipts for various years, and in each month, at both the Grand avenue and stock yards markets for the last two years, are given above. As compared with other markets Kansas City's receipts for 1900 make an excellent showing. They are larger than those at Chicago, and but a few thousand behind St. Louis. It is safe to say that more animals were received for sale at Kansas City the past year than there were at St. Louis, as the latter's official figures include what are known as "transients," that is, animals which are unloaded only for feeding and watering and which are not placed on sale. A very large percentage of the mules and horses sold in Kansas City to southeastern purchasers go through St. Louis enroute and stop there for feed and water. Thus as Kansas City's business increases the receipts at St. Louis increase in like proportion.

THE ST. JOSEPH MARKET.

From an insignificant live stock market to the exalted position of fourth place in the list of packing centers of the world is the proud record made by St. Joseph in less than three years' time. Prior to the opening of the packing houses, April 4, 1898, St. Joseph was little known to the live stock interests of the country, but with the building of the mammoth modern packing houses of Swift & Company and Nelson Morris & Co., and the erection of the finest exchange building and stock yards in the world, a new era began, and from the commencement of operations the gains made have been marvelous and rapid. Business of 1898 indicated an increase of over 400 per cent over 1897, and the gain made in 1899 over 1898 was almost as great. The subsequent erection and operation of the immense new plant of the Hammond Packing Company greatly added to the killing demand, consequently the year 1900 shows tremendous gains over 1899, as will be seen by consultation of the following tables. It will be seen that monthly receipts of cattle, hogs, sheep and horses and mules have made large gains over the corresponding months of the preceding year and tremenduous gains over the same months of 1898. The results attained during this short period have demonstrated that shippers and producers fully appreciate the Herculean efforts of the promoters to establish a market at their doors superior to all others and to afford them the advantages of the finest stock yards that ingenuity could conceive or money construct.

The beautiful new exchange building which is 128 by 165 feet, is one of the most convenient and complete in the country. There are fifteen offices on the first floor; thirty-five each on the second and third floors, and there will be thirty-five rooms on the fourth floor when finished, making in all 120 offices.

The following tabulation indicates the receipts of live stock for the years 1898, 1899 and 1900; the increase or decrease and the aggregate increase of 1900 over the two preceding years:

Cattle.—1898, 232,074; 1899, 294,960; 1900, 390,361; increase over 1899, 95,411; increase over 1898, 158,287.

Hogs.—1898, 1,034,035; 1899, 1,401,794; 1900, 1,676,521; increase over 1899, 274,727; increase over 1898, 642,486.

Sheep.—1898, 121,407; 1899, 258,432; 1900, 390,308; increase over 1899, 313,876; increase over 1898, 268,901.

Horses and Mules.—1898, 10,587; 1899, 9,292; 1900, 13,629; increase over 1899, 4,337; increase over 1898, 3,042.

The marvelous growth of South St. Joseph as a packing center is best shown in the official report of the Cincinnati Price Current, which is authority on all matters pertaining to the packing industry. For the year closing October 31, 1900, 22,875,000 were slaughtered at the various western markets, a decretse of 370,000 as compared with the previous year, yet in the face of this great reduction in the number of hogs packed South St. Joseph slaughtered 1,585,000 hogs, or 252,000 more than were slaughtered the preceding year, which placed her fourth in the list of the great packing centers of the world.

A better conception of South St. Joseph's packing importance is shown in the following tabulated statement, compiled from Price Current statistics, showing the number of hogs slaughtered during the past year at the prominent markets, and the increase or decrease:

Cities	1900.	1899.	Inc.	Dec.
Chicago	7,160,000	7,499,000	... ...	339,000
Kansas City	2,770,000	2,882,000	... ...	112,000
Omaha	2,155,000	2,254,000	... ...	99,000
S. St. Joseph	1,585,000	1,333,000	252,000	.. ...
St. Louis	1,560,000	1,623,000	... ...	63,000
Indianapolis	1,154,000	1,177,000	... ...	23,000
Milwaukee	852,000	971,000	... ...	119,000
Sioux City	680,000	455,000	225,000	.. ...
Ottumwa	653,000	711,000	... ...	58,000
Cincinnati	650,000	683,000	... ...	33,000
Cedar Rapids	452,000	455,000	... ...	3,000
St. Paul	430,000	373,000	57,000	.. ...

SOUTH OMAHA MARKET.

This market has experienced its share of the general prosperity of the industry, as is shown by the following table:

Year	Cattle.	Hogs.	Sheep.
1884	88,603	3,686	5,593
1885	116,963	152,524	19,484
1886	148,515	447,019	41,499
1887	239,377	1,056,524	79,422
1888	355,923	1,262,647	172,138
1889	473,094	1,224,691	152,517
1890	615,337	1,702,723	153,873
1891	601,002	1,537,387	169,365
1892	755,059	1,613,384	188,588
1893	852,456	1,406,451	252,273
1894	821,512	1,932,677	243,945
1895	586,103	1,186,726	204,870
1896	586,578	1,216,370	358,005
1897	810,949	1,610,981	627,160
1898	812,244	2,101,387	1,085,136
1899	837,563	2,216,082	1,086,519
1900	828,204	2,200,926	1,276,775
Total	9,529,482	22,872,585	6,117,453

LARGEST RECEIPTS OF STOCK IN ONE DAY.

Cattle—September 24, 1900	10,710
Hogs—July 31, 1894	20,684
Sheep—October 10, 1900	17,682
Horses and Mules—June 23, 1900	2,274
Cars—October 9, 1900	561

LARGEST RECEIPTS OF STOCK IN ONE WEEK.

Cattle—Week ending October 31, 1899	38,449
Hogs—Week ending July 31, 1894	103,837
Sheep—Week ending August 31, 1900	66,599
Horses and Mules—Week ending June 30, 1900	5,419
Cars—Week ending August 31, 1900	2,600

LARGEST RECEIPTS OF STOCK IN ONE MONTH.

Cattle—October, 1899	128,673
Hogs—December, 1898	282,204
Sheep—October, 1900	211,955
Horses and Mules—June, 1900	11,389
Cars—October, 1899	7,587

LARGEST RECEIPTS OF STOCK IN ONE YEAR.

Cattle—1893	852,456
Hogs—1899	2,218,482
Sheep—1900	1,276,775
Horses and Mules—1900	59,645
Cars—1900	72,207

ST. LOUIS MARKET.

The beginning of the Twentieth century records the termination of a great year in the native cattle trade at the National Stock Yards at St. Louis. At no period in its history has the beef buying force been so large and versatile as at present and the butcher department, which has always been a source of great pride to followers of this market, has expanded to a breadth that induces the most conservative to speak of its prospects in the most glowing terms.

That great cattle country south of the quarantine line, which practically represents the entire Southern States, is developing into such immense proportions that predicting the possibilities of the future by the strenuous efforts transpiring at present, there is no question but that the time is rapidly approaching when the South will produce as many and as fine cattle as any section in the universe.

In the hog trade in the year 1900 the sales were the largest since the yards opened business, but the arrivals which make the record were a few thousand less than the grand total of the year before.

Greater results were evolved in 1900 from western range horses than in any year since the rejuvenation of the industry. More systematic efforts by local commission interests were made, larger numbers were received and larger numbers sold. The demand was more concentrated, more varied, more representative.

The following is the annual statement of cattle, hogs and sheep received during the past twenty-seven years:

Year.	Cattle.	Hogs.	Sheep.
1874	234,002	498,840	41,407
1875	232,183	181,708	46,316
1876	234,671	333,560	84,034
1877	322,571	426,109	119,174
1878	317,830	835,446	82,549
1879	333,115	1,163,748	99,951
1880	346,533	1,262,234	129,611
1881	406,804	1,308,514	226,124
1882	356,434	643,871	303,753
1883	332,625	843,672	272,852
1884	390,569	1,079,827	277,678
1885	311,702	1,145,546	245,793
1886	307,244	935,995	212,101
1887	387,709	772,171	315,546
1888	453,918	652,127	368,843
1889	396,095	772,579	278,977
1890	510,755	925,480	282,206
1891	630,356	840,927	347,573
1892	653,337	847,703	298,432
1893	756,485	777,433	350,040
1894	663,657	1,146,925	292,223
1895	733,526	1,084,574	454,858
1896	792,302	1,618,090	591,033
1897	787,690	1,630,773	604,281
1898	683,707	1,728,317	435,893
1899	683,998	1,800,942	408,984
1900	698,370	1,791,986	416,146

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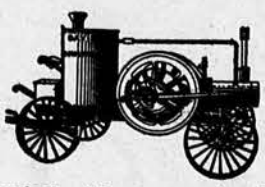

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