

KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, MARCH 28, 1901.

SIXTEEN TO TWENTY
PAGES—\$1.00 A YEAR.

BREEDERS' DIRECTORY.

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D. TROTT ABILENE, KANS., famous Du-
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DUROCS. Registered stock all ages.
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MAPLE AVENUE HERD J. U. HOWE,
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DUROG-JERSEYS. Farm 2 miles west of
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Only choicest individuals reserved for breeding
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THOROUGHBRED HEREFORD CATTLE.
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Some choice July, August and September males at
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D. L. BUTTON, North Topeka, Kans., Breeder of
Improved Chester Whites.
Stock for sale. Farm two
miles northwest of Re-
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Maple Grove Herd of Registered POLAND-CHINAS
HIRAM SMITH, Colwich, Sedgwick Co., Kans.
Headed by the grand boar, Black Chief 42357, ideal
U. S. 48269, and assisted by Perfect I Am Vol. XXIII,
grandson of Perfect I Know 10172, grandam the great
sow, Anderson's Model 43611, mated to a lot of choice
selected sows of the most noted prize-winning fami-
lies. A fine lot of fall pigs ready to ship.
Inspection or correspondence invited.

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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,
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Sold out of everything but fall pigs. Place
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and White Wyandotte cockerels for sale.
MANWARING BROS., Lawrence, Kans.

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We now have for sale 10 Good Young Boars
8 months old, and 8 Bred Gilts—fine, well de-
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October, and November 1900 pigs for sale cheap.
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prizes at the World's Fair. The home of the greatest
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S. Tec. Address F. P. Maguire, Haven, Reno Co., Kas.

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Contains breeders of the leading strains. We have
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rise-winning strain. Young stock for sale.
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Twenty selected pigs of September farrow for sale.
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Herd headed by I Know Perfection 48268 O., sired by
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Write me, or come and buy for yourself. I will guar-
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Two hundred head. All ages. 25 boars and 45 sows
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Large-boned, Prize-winning. We have for sale 80
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raised. We can furnish herds not akin, of any of the
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enough to fit for next fall's shows. Prices reasonable.
Nothing but good ones shipped on orders.
WAIT & EAST, Altoona, Kansas.

Poland-Chinas Extra Good
Fall Boars
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FANCY STRAINS.

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Pure Bred Poland-Chinas

I have 25 choice October pigs that I will sell for \$10
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Know 18148, and Hadley U. S. 20186; dams equally as
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choice spring pigs, sired by Logan Chief 2d 24427, and
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Mention this paper when writing.

MEADOW BROOK SHORTHORNS—Some fine
M young stock, 20th Earl of Valley Grove at head
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Polled Durhams! This little ad. will
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best Scotch bred Polled Durham herd of cattle in the
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1,800 acres. Pure bred stock only. Herefords, Poland-
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JAMES A. WATKINS, Farm is two miles south
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Norwood Shorthorns. V. R. Ellis,
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Sir Charmin 4th at head of herd. Orulokshank top
crosses on best American families. Young stock for
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A few choicely bred young bulls—spring yearlings
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RED POLLED CATTLE.
Largest Herd in America.
S. A. CONVERSE,
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Breeders of Red Polled cattle. Herd headed by
Powerful 4582. Pure-bred and grades for sale.
Also, prize-winning Light Brahmas.

**TWO CRUICKSHANK-TOPPED
SHORTHORN BULLS FOR SALE**
Both reds; 8 and 9 months old. Also summer
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Prompt response to enquirers.
O. E. MORSE & SONS, Mound City, Kans.

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GEO. GEORGMILLER & SON,
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Breeders of full bloods, and high grades. For sale
a number of extra good high grade bulls from 6 to 15
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numbers 80 head.

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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
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Thos. J. Anderson, Manager, there, or
ANDERSON & FINDLAY, Prop's., Lake Forest, Ill.

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The get of Marmion 66646 and Anxiety Wilton A—
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good individuals, and of the best of breeding. Inspe-
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FRED COWMAN, Lost Springs, Kans.
Breeder (not dealer) of HEREFORD CATTLE.

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Registered Galloway Cattle.
Also German Coach, Saddle, and
Trotting-bred horses. World's
Fair prize Oldenburg Coach
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service. Visitors always welcome. Address
BLACKSHERE BROS.,
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CATTLE.

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WE HAVE 28 SHORTHORN BULLS,
FOR SALE
Eight months to 2 years old; one specially bred
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way-Shorthorn bull, 2 years old.
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On U. P. R. E., 12 miles East of Topeka.

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The blood of Roan Gauntlet and Champion of Eng-
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Can offer Godoy Calves from these tribes.
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BREEDER OF—

**PERCHERON HORSES,
HOLSTEIN FRIESIAN CATTLE,**
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Missouri's Black Chief at head of herd. B. P. E.,
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guaranteed as represented.

Sycamore Springs Stock Farm

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No Shorthorns for sale at present but will have
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spection of our herd invited.
Correspondence solicited.

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SHORTHORN CATTLE.

GWENDOLINE'S PRINCE 130913 in service, a son
of the \$1,100 cow, Gwendoline 5th. Best Scotch,
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Herd composed of Young Marys and Galateas.
Young Bulls for sale. Sired by Phyllis Duke
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Scotch, and Scotch-topped
**SHORTHORN CATTLE
POLAND-CHINA SWINE.**

Herd bull, Sir Knight 124408. Herd boars, Black
U. S. 24 22603 S., and Sunflower Black Chief 20023.
Representative stock for sale. Address
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Wild Eyes, Oraggs, Peach Blossoms, Duchess Oraggs,
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 J. H. McALLISTER, Proprietor.
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 PURE BRED GALLOWAY CATTLE, POLAND-CHINA AND CHESTER WHITE HOGS, JACKS AND JENNETS.
 STANDARD BRED STALLIONS AND MARES.
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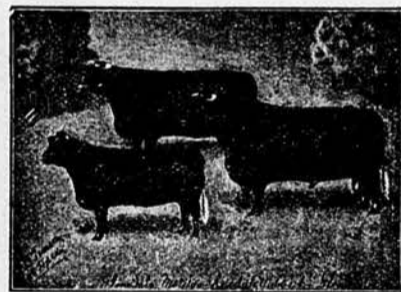
125
RAVENWOOD :: SHORTHORNS
 125
 C. E. LEONARD, - - BELLAIR, MO.
 Males and Females For Sale. Inspection especially invited. Lavender Viscount 12475, the champion bull of the National Show at Kansas City heads the herd. R. B. and Telephone Station, Bunston Mo.
 Ed. PATTERSON, Manager

Registered Herefords.

THOS. EVANS, Breeder,
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 SPECIAL OFFERINGS:
 FOR SALE—Six bulls and fifteen heifer calves, one 8-year-old imported bull, one yearling bull, and 5 cows.

H. M. Satzler,
 Burlingame, Kansas,
 BREEDER OF.....
 HEREFORD CATTLE,
 BERKSHIRE SWINE,
 COTSWOLD SHEEP.
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H. R. LITTLE,
 HOPE, DICKINSON CO., KANS.,
 Breeds Only the Best
 Pure-bred
SHORTHORN CATTLE.
 The herd numbers 135, headed by ROYAL CROWN 126888, a pure Cruickshank, assisted by Sharon Lavender 143002. For Sale just now 16 Bulls of serviceable age, and 12 Bull Calves. Farm 1 1/2 miles from town. Can ship on Mo. Pacific, R. I., or Santa Fe. Foundation stock selected from 5 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 127284, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Twenty bulls for sale.

C. F. WOLFE & SON, PROPRIETORS.

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

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 Davenport, Iowa.—Have an extended acquaintance among stock breeders. Terms reasonable. Write before claiming date. Office Hotel Downs.



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

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 of 20 pages. Pictures of 45 wild animals and the ir skins. Prices of raw furs. All for a 2-c stamp.
 N. W. HIDE & FUR CO., Minneapolis, Minnesota.

Send at once for agent's terms and sample copies.

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

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

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 AS ALWAYS, VASTLY IN THE LEAD.
PERCHERONS, FRENCH COACHERS, SHIRES.

ON HAND, HOME-BRED AND IMPORTED
270 STALLIONS, 235 MARES.

The greatest collection of stallions ever brought together. Our two large, recent importations for this year included the Principal Prize Winners at the **WORLD'S EXPOSITION, PARIS,** and at the Government Shows at Amiens and Mortagne, and the Tops, first choice, purchased from the leading studs of France and England.

The superiority of the Oaklawn Percherons was also shown at the **INTERNATIONAL LIVE-STOCK EXPOSITION** at Chicago, December, 1900, pronounced by press and public the greatest live stock exhibition ever seen, where Oaklawn's Exhibit was awarded **Three 1st Prizes, three 2d Prizes, three 3d Prizes, two 4th Prizes and two 5th Prizes** in the three stallion classes; **Championship, stallion, any age; Championship, mare, any age; 1st and 2d Prizes for collections; \$100 Gold Medal, best group, five stallions; \$100 Gold Medal, best group, three mares.**

Catalog on application. Prices reasonable.
DUNHAM, FLETCHER & COLEMAN,
 WAYNE, DU PAGE CO., ILLINOIS.

G. H. BUTLER, Frankfort, Kansas,

offers for sale a draft of 250 head from his herd of **ABERDEEN-ANGUS CATTLE.** This herd of Aberdeen-Angus cattle are the equal for practical purposes of any herd of its size in the state.
 20 BULLS, about 19 months old, weighing 1,000 pounds or over. These bulls were sired by Heather Lad of Estill 2d, 17440, Second Laird of Estill 19532, and Hummel 23993.
 25 HEIFERS, coming 3 years old. These heifers are large, will average over 1,100 pounds, are all sure in calf to Gardner Mine 32240.
 45 HEIFERS, coming 2 years old. These heifers are bred to Emmet P 36783, and Regnal Doon 32728. These heifers are exactly the same breeding as the twenty bulls described above.

The dams of these 90 cattle were by Unit 13568, their granddams were by Kenochtry Jock 12137, their great-granddams by Ben Butler 4601, their great-great-granddams were by Third Editor 4600.
 80 BULLS about 10 months old, weighing over 600 pounds. They were sired by Heather Lad of Estill 2d 17440, Second Laird of Estill 19532, Hummel 23993, and Ebbitt 31509.
 80 HEIFERS, about 10 months old, bred exactly as the 80 yearling bulls.
 Breeding of the 160 yearlings are the same as that of the larger cattle, excepting that part of the dams are from Estill bulls.
 Would like to sell these heifers in lots of 20 as foundations for new herds.

RIDER AGENTS WANTED
 One in each town to ride and exhibit sample 1901 Bicycle. **BEST MAKES 1901 Models, \$10 to \$18**
 '99 & '00 Models, high grade, \$7 to \$12.
500 Second-hand Wheels all makes and models, good as new, \$3 to \$5. Great Factory Clearing Sale at half factory cost. We ship anywhere on approval and ten days trial without a cent in advance.
EARN A BICYCLE distributing Catalogues for us. We have a wonderful proposition to Agents for 1901. Write at once for our Bargain List and Special Offer. Address Dept 159C **MEAD CYCLE CO., Chicago**

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 Our Handsome Catalog Free, costing over \$2 each, contains 144 pages, with 1500 illustrations and 15,000 articles listed, a which we guarantee to save you from 15 to 75%. Most complete book of its kind. Sent for 10c to pay cost of mailing, which will be refunded with first order. Valuable book of reference and ought to be in every household. Get it cheap and handy. **H. Her Chemical Co., Dept 47, Chicago.**
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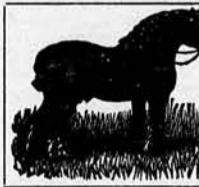
"AVENARIUS CARBOLINEUM" PAINT.
 Guaranteed to preserve all wood-work against rot.
 Radical Remedy against Chicken-lice. Successfully used for 25 years.
CARBOLINEUM WOOD PRESERVING CO.
 Circulars free. Milwaukee, Wis.

We want an agent in every county in the state. Send at once for terms and sample copies.



NEW IMPORTATION

Our new importation of **FRENCH PERCHERON STALLIONS** was landed at our barn, at Shenandoah, Iowa, September 16. Buyers will find at our establishment 60 Head of first-class Percheron stallions from which to make their selections. Prices are made right. Come and see the horses. It will do you good. Mention Kansas Farmer when you write.
M. L. AYRES, Shenandoah, Iowa.



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.



Draft Stallions. PERCHERONS, SHIRES, AND CLYDES.

Finest collection of imported Black Percherons west of the Mississippi River. All horses personally selected by a member of the firm with the aid of our own private interpreter, and a first choice from the oldest and leading breeders of France. All fresh, young stock. If you want a Good Stallion we can suit you. Barns are in town. For further information, address **KEISER BROS., Keota, Iowa.**
 (On O. E. I. & P. Railway, 14 miles west of Washington.)

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

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



AMERICA'S LEADING HORSE IMPORTERS.

We imported more prize-winners at Universal Exposition, Paris, and the Government Show at Amiens and Mortagne than all others combined. Our Percherons won every first prize except one at the Universal Exposition at Paris. We imported more horses from France than any other three firms in America. We are the only firm buying in France without the aid of an interpreter, hence we get the best horses for the least money. More Coach stallions, more ton black Percheron stallions than can be found in the stables of all other importers.
 If you want the best, call on or write **McLAUGHLIN BROS.,** Sixth and Wesley Aves., Columbus, Ohio.

Norman Horses

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



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

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

ENGLISH SHIRE, and PERCHERON STALLIONS.



WATSON, WOODS BROS. & KELLY CO., importers DRAFT STALLIONS.
 Lincoln, Neb. Three Importations made in 1900.
 All our horses are personally selected by Mr. Watson, who buys only of the best breeders in Europe. Mr. Watson was the World's Fair Judge of Draft Stallions. Our December importation is the 25th shipment made direct from Europe by him. OUR STABLES are located corner Ninth and 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.

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

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

Correspondence Solicited. Inspection Invited.
HENRY AVERY & SON, WAKEFIELD KANS.

TEBO LAWN HERD SHORTHORNS

—HERD BULLS ARE—

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

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

E. M. WILLIAMS, Manager. G. M. CASEY, OWNER, SHAWNEE MOUND, HENRY COUNTY, MO.

...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.



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.

T. K. TOMSON & SONS, ELDERLAWN HERD OF SHORTHORNS DOVER, SHAWNEE COUNTY, KANSAS.

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



Sunny Slope Herefords.

290 HEAD FOR SALE

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

C. A. STANNARD, Emporia, Kansas



STEELE BROS., Belvoir, DOUGLAS COUNTY Kans Breeder of SELECT HEREFORD CATTLE

Young Stock For Sale. Inspection or Correspondence Invited.

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.

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M. R. PLATT, Kansas City, Missouri.

Office at Platt's Barn, 1613 Genesee Street.

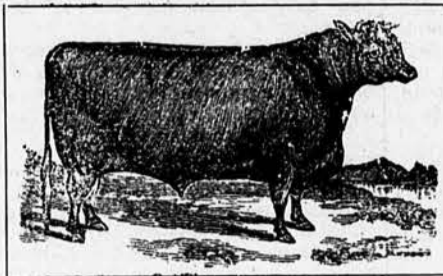
250 HIGH GRADE ANGORA DOES

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

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

50-SHORTHORN-50 BULLS, COWS, AND HEIFERS

Will be sold at PUBLIC AUCTION, at the Sears Farm, 3 1-2 miles northeast of LEON, IOWA, THURSDAY, APRIL 25.



FROM THE HERDS OF
A. D. SEARS & BROS.,
GEO. WADSWORTH,
and W. H. COLTER.

THEY ARE A FINE
LOT.

COL. F. M. WOODS, AUCTIONEER. Catalogues ready April 10, and can be had by addressing A. D. SEARS, LEON, IOWA. Bids may be sent to C. B. TUTTLE, care of A. D. Sears.

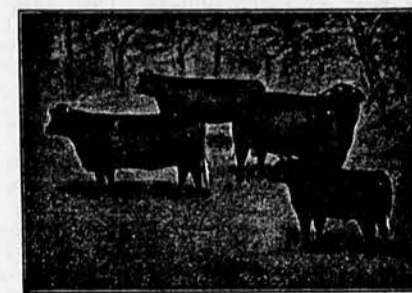
PEARL SHORTHORNS.

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.



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

HEREFORDS,

BELTON, CASS COUNTY, MO.

BULLS in service. HESIOD 29th 66304; Imp. RODERICK 80155; MONITOR 58975; EXPANSION 93668; FRISCOB 93674; FULTON ADAMS 11th 83781. HESIOD 29TH 66340.

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

50 Shorthorn Bulls For Sale.

THE BILL BROOK HERD OF REGISTERED SHORTHORNS

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

The Three Million Acre FARWELL RANCH

(Also known as the X. I. T. Ranch and the Capitol Syndicate Ranch)
in the Panhandle of Texas

FOR SALE

IN TRACTS TO SUIT.

The land is largely chocolate or black sandy loam, deep, rich, capable of producing forage crops in great abundance. It is thickly coated with buffalo, mesquite, grama, sedge and other choice grasses. Rainfall ample for production of forage crops, grasses and fruits. Admirably adapted for Grapes, Pears, Peaches, Apples, Plums, Melons, etc. An inexhaustible supply and excellent quality of water is procurable at an average depth of 125 feet.

The altitude varies from 2300 feet at the south to about 4700 at the north. The temperature is equable and the climate unexcelled for healthfulness. This is the best cattle and stock breeding country in the world. Panhandle cattle are of very superior quality, a carload of steers bred on this Ranch having been reserve number for the grand champion carload of fat steers at the International Live Stock Exposition in Chicago, December, 1900. The stock subsists on the pastures the entire year, finding very nutritious food in the cured native grasses. This is an unprecedented opportunity for those desiring to engage in the stock farming business or for investors willing to hold for appreciating values. The small ranchmen in the Panhandle have made more in recent years for the capital and energy invested than the farmers in any section of our country.

The Ft. Worth & Denver City Ry. traverses the north end of this land, the Pecos Valley and Northeastern Ry. (part of the Santa Fe system) the south end, and the Chicago, Rock Island and Pacific Ry. is constructing a line from Liberal, Kas. to El Paso, Texas, which will soon traverse the middle of it.

Title perfect. Will be sold in solid blocks to suit purchaser for cash or very liberal time payment.

To inspect lands call on A. G. Boyce at Channing, a station on the Ft. Worth & Denver City Ry. in Hartley Co., Texas, and for full particulars write him or Wm. Boyce, agent, Amarillo, Texas; or Geo. Findlay, agent, 148 Market Street, Chicago, Ill.

Agricultural Matters.

Pasture Crops for Hogs.

PRESS BULLETIN, OKLAHOMA EXPERIMENT STATION.

Pasture and range are necessary in order to keep breeding swine in a healthy condition and grow the stock at a profit. The man who tries to raise swine under other conditions is playing a losing game, and his balance will be on the debtor side of the ledger, just as sure as we have day and night. Although these facts have been vouched for many times by experiment stations and successful swine raisers, and given wide publicity, thousands of farmers still continue in trying to raise hogs in a dry lot with nothing but corn as a feed, with the expectations of making it a profitable operation.

MAKE IT LARGE.

A hog pasture does not mean a dust lot with possibly a few old weeds off in one corner, but a good and commodious range, and if planned to give the best results, it will contain a variety of crops, selected as to their food value. The pasture should not be so small that the hog is compelled to eat his own filth to get the feed. Every farm should have 6 to 8 acres of hog pasture fenced purposely for this use. This is in addition to what range may be utilized outside at times. Better far to have a little too much than not enough. If the crop gets ahead of the hogs and becomes woody, cut it off with the mower and a new growth will start. This can be done with many plants and will pay even if the mowed portion is not gathered. The pasture may be greatly fertilized by this method in many cases. The enclosure should be divided into two or three parts, at least, so that while one part is being pastured, crops may be growing in the others.

EXERCISE IS GOOD.

While succulent food is very essential the year round for growing and breeding stock, the exercise is just as necessary. Pigs confined in pens will do much better if they have some green feed, but the results will be vastly better if the pigs are allowed a range and the chance to gather this feed for themselves.

Any green crop is much better than no pasture, but some crops for this purpose are very much superior to others, and a variety of crops, even though they may be much alike in composition, are superior to a single crop. Many swine raisers that appreciate the value of a hog pasture, do not realize the importance of giving attention to variety and composition of the plants to be used.

COMPOSITION.

In selecting the crops for a hog pasture, consider the composition of the plants as you would consider the composition of the grain in a ration. Bear in mind that certain crops are rich in the food nutrient protein, that is so essential in the animal system to build up the frame and muscles, and is very necessary in the food of breeding stock. Crops of the opposite nature are rich in carbohydrates, the heat and fat forming compounds.

Endeavor to have some of the former to pasture along with the latter, and the results will be better. Plants belonging to the former group, those that are especially rich in protein, are alfalfa, clover, field peas, cow-peas, soy-beans, vetches, and peanuts. Rape, sorghum, the cereals, sweet potatoes, and artichokes belong to the opposite group. Aside from being especially valuable for food, the cow-pea group adds greatly to the fertility of the soil while growing on it, and will give paying yields on soil too poor for other crops. While a wheat pasture, or a sorghum pasture perhaps is of great value, the results will be much more satisfactory if cow-peas or some like crop can be pastured at the same time.

SUCCESSION.

In selecting the crops, due attention should be paid to the point of having a succession of crops that will furnish green feed at all times. Drought resisting crops should be included for the drouthy time of year. Some crops with proper handling will furnish feed almost the year round, while others are suitable for only one of the seasons, or a part of two.

In this list of crops for hog pasture, alfalfa, wheat, rye, and oats will not be taken up in full.

ALFALFA.

Where alfalfa can be grown success-

If You Have Rheumatism, Send no money, but write Dr. Shoop, Racine, Wis., Box 27, for six bottles of Dr. Shoop's Rheumatic Cure, express paid. If cured pay \$5.00. If not it is free.

fully, it has no equal as a pasture crop for hogs, and it furnishes a large amount of feed almost the year round, when handled properly. But about 9 men in 10 that use it for that purpose ruin it by too close pasturing and at improper times.

WHEAT, OATS AND RYE.

Wheat, oats, and rye are standard crops for this purpose and may be so grown as to furnish green feed for almost the whole year. But many times they are over pastured and pastured too late when the crop is to be left for grain. In both of these cases other crops should be furnished to prevent the over pasturing and at improper times.

In addition to the above named crops that may be utilized for this purpose, should be mentioned field peas, rape, and vetches.

FIELD PEAS.

The field pea belongs to the cow-pea class and is suitable to a cool, moist climate and will withstand a hard frost, so should be seeded early in March. Broadcast a bushel and a half of peas, plow under 4 or 5 inches and harrow down and then seed a bushel and a half of oats on top of this.

The peas are ready to pasture when they start to bloom. The seed costs from \$1.50 to \$2 per bushel, which will keep many from growing them. It is well to see if a more suitable crop is not available, but field peas are worthy of a trial in this country. The yield of oats and peas the past season on the station farm was 15 tons per acre. Fair returns have been obtained from fall seeding on the station farm.

RAPE.

The rape plant makes the best of spring pasture. It is a plant that furnishes, under fairly favorable conditions, a large amount of green feed in a short time from planting. In color and texture the leaves resemble cabbage, but rape grows 2 or 3 feet tall and has no value only in the green stage. It is grown over a wide territory and under varying conditions, but adapted to moist, cool weather and a good, rich soil. For a time it was thought suited only to the Northern States and Canada, but gradually it is working south and has given very favorable results in Oklahoma and should be tried by all hog and sheep raisers.

The following results were obtained on the station farm the past season.

	Tons per acre.
Rape, drilled, rows 30 inches	23.5
Rape, drilled, rows 6 inches	11.
Rape, drilled with oats	12.5

The seeding was made the last week in March and the yields determining June 2. The plots were on well manured land.

For this country the seeding should be made early in March. The hot, dry weather of August has stopped the growth here, and the June seeding for fall pasture as advised by some will give very uncertain results, as will the seeding in corn just before the last cultivation. Such methods may give fair results at times of much rainfall. It is a plant that stands a great deal of cold and frost.

Seeding made on the station farm last fall have lived through the winter and the plants are making an early spring start. The fall growth was rather small. Both broadcasting and drilling for cultivation, are practiced. For this country, if much dependence is put upon the crop, drilling in rows to admit of cultivation is recommended. Planted in this way it will stand the drought much better and if pastured and cultivated properly, the period of growth may be greatly extended, and much more feed obtained. A good rich soil is more essential where broadcasting is employed.

For broadcasting, three to five pounds of seed per acre should be used. For drilling in rows 30 inches apart, one to two pounds should suffice. The poorer the soil and the more unfavorable the conditions, the more seed necessary.

The plants reach their maximum growth in six to ten weeks from seeding, but pasturing may commence as soon as the plants are firmly rooted. Sheep or hogs do not like the plants at first, but by limiting their other feed, they will eat it, and when they have acquired a taste for it they eat it greedily. Care must be taken in turning sheep on it to avoid bloating. There will be several successive growths, if the plants are not pastured or cut closer than 4 inches from the ground. The seed costs about ten cents per pound in small quantities. The Dwarf Essex variety should be used.

Rape and field peas, and rape and oats make fair mixtures for seeding.

FOR SUMMER AND FALL.

The following may be considered

summer and fall pasture crops: Sorghum, cow-peas, peanuts, sweet potatoes, and artichokes.

SORGHUM.

Sorghum is the most reliable and largest producer of pasture for summer. While it furnishes a large amount of green feed per acre, it is highly carbonaceous, and should be pastured along with cow-peas for best results.

Its culture is well understood. Seedlings may be made from spring to late summer. It will always be found a standby during droughts. While broadcasting is the common way of seeding for hog pasture, it is always advisable to drill and cultivate some, as this will make good winter feed for hogs. In selecting the seed, the sugar-bearing varieties should be chosen and seeded thinner on the ground than when the crop is grown for hay. Sorghum may be seeded with oats in the spring with good results. The sorghum continues after the oats are gone.

COW-PEAS.

Cow-peas make a good twin brother to sorghum for hog pasture. The peas furnish the nitrogenous material that the sorghum lacks. Cow-peas are great drought-resisters and admit of many ways of planting and over a large season. Seeded on ground from which a crop of oats or wheat have been removed, they will produce from 1½ to 2 feet of growth by the first of September. For earlier feed than this they should be seeded the last of April or the first of May.

While broadcasting is a very successful method of seeding them, it is very desirable to drill and cultivate some as this will aid them to withstand drought, and more feed will be produced at a critical time. For broadcasting about 1¼ bushels of seed is required per acre; for drilling in rows 30 inches apart, three pecks.

PEANUTS.

Peanuts do well in Oklahoma, and many are raised for market, but they have greater value to the Territory for hog pasture. For hog pasture they can be made to pay on any soil that is open enough to work easily. The hogs harvest them and that expense and labor is saved. Many a peanut crop harvested and marketed at a loss would have yielded a handsome profit if it had been used as a hog pasture. Peanuts should be valued as a protein producer, and for that purpose are very valuable as they contain about 30 per cent of that most valuable food ingredient. While the vines are green they are eaten and afford valuable feed. The crop should be pastured along with sorghum, rye, wheat, or oats for the most profitable results. For hog pasture the crop can be grown as cheaply as corn. Plant as soon as all danger of frost is over. Have the soil in fine tilth. Make the rows two and a half or three feet apart and drop the seeds twelve to sixteen inches apart in the row. About two bushels of the nuts in the pod will be required to seed an acre. Give clean culture, and no hilling up is necessary. The Spanish variety is best suited for this purpose.

SWEET POTATOES.

Sweet potatoes make good feed for hog pasture. The expense of this crop is quite light up to the time of harvesting and the hogs will do this to perfection and give good returns for value received. The culture of the crop is well understood. It can be made very profitable utilized as hog pasture.

ARTICHOKEs.

Artichokes are a most excellent crop to furnish fall and winter pasture for hogs. Under proper treatment 400 to 800 bushels of tubers per acre may be counted on. Plow the ground as you would for potatoes; plant in April in rows three feet apart with the hills fourteen to eighteen inches apart in the row, and cultivate as you would corn. In this country the pasture is available the winter through.

Grass Experiments.

An account of some exceedingly important experimental work which has been determined upon jointly by the United States Department of Agriculture and the Kansas Experiment Station on the Waldron farms in Harper County is given by the Anthony Bulletin as follows:

H. B. Waldron, the proprietor, has very generously placed at the disposal of the department of agriculture all the land necessary for the work, and is to bear the expense connected with the work except the necessary seed. Prof. F. Lamson-Scribner, agronomist of the department of agriculture, has the direction of the work for the department, and Prof. J. T. Willard, director of the Kansas Experiment Station, represents the Kansas station.

Prof. Willard and Mr. C. L. Shear,

WOULD you rather buy lamp-chimneys, one a week the year round, or one that lasts till some accident breaks it?

Tough glass, Macbeth's "pearl top" or "pearl glass," almost never break from heat, not one in a hundred.

Where can you get it? and what does it cost?

Your dealer knows where and how much. It costs more than common glass; and may be, he thinks tough glass isn't good for his business.

Our "Index" describes all lamps and their proper chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address MACBETH, Pittsburgh, Pa.

who have been sent here by Prof. Scribner from Washington, are now making the necessary plans for inaugurating the work. The experiments proposed are along two lines. One has for its object the trial of such cultivated and native grasses as give promise of being valuable for re-seeding and laying down pastures on cultivated land. The other has to do with renovating worn-out pastures and increasing their carrying capacity.

Awnless brome-grass is one of the grasses to be tried in the first series of experiments. This grass has already been tried quite extensively in the semi-arid regions of the great plains and has proven very successful in many parts of the Dakotas, Nebraska, and also in some parts of Kansas. It is a native of central Russia, where the conditions are somewhat similar to those here. It is a perennial grass, forming a dense turf, and is valuable for hay as well as pasture. Orchard-grass and meadow-fescue are also to be tried. These tame grasses have been experimented with at the Kansas station at Manhattan and have met with more success than perhaps any other tame grasses thus far tried. The greatest hope, however, for getting permanent pasture, is found in seeding with native grasses.

The department of agriculture, under direction of Prof. Scribner, has collected during the past year considerable quantities of native grass-seed, some of which is to be used on Mr. Waldron's farms.

Western wheat-grass is one of those that is to be tried. This grass is very valuable, both for pasture and hay. A list of all the grasses to be planted in the experiment is here given:

Tall meadow oat-grass.
Perennial rye-grass.
Reed fescue.
Orchard-grass.
Red top.
Awnless brome-grass.
Colorado blue-grass.
Teosinte.
Slender wheat-grass.
Sanfoin.
Western wheat-grass.
Meadow-fescue.
Alfalfa.
Bermuda grass.
Sweet clover.
Metcalf bean.
Japanese barn-yard grass.

Perhaps the most interesting experiment, however, to the stockmen of this section, is that which has to do with the renovating of worn-out pastures. The method of treatment is as follows:

The pasture is at first thoroughly disc harrowed both ways, in order to loosen up the turf, give the roots a chance to grow, and allow the moisture to enter the soil. After disking, the seed of some of the tame grasses is to be sown and the whole leveled down by rolling.

The object in sowing the seed is to have something to keep the weeds down and from gaining possession of the land, while the native grasses are regaining their vigor. The tame grasses can not successfully compete with the wild grasses, which have become adapted to the present climatic conditions through years of struggle, so that it is only a question of a year or two when the tame grasses will be completely overcome and the native grasses regain their vigor.

Experiments of this kind have already been carried on by the department of agriculture at Abilene, Texas, and by the Kansas Experiment Station

TO CURE A COLD IN ONE DAY

Take Laxative Bromo Quinine Tablet. All druggists refund the money if it fails to cure. E. W. Grove's signature is on every box. 25 cents.

at Manhattan. At Abilene, Texas, a committee of reliable stockmen examined the range so treated at the beginning of the experiment, and at various intervals during the progress, and at its close. The committee reported that at the close of three years the carrying capacity of the range had been doubled. The conditions at Abilene, Texas, are, however, much more unsatisfactory than here. The experiments carried on at Manhattan by Prof. C. C. Georgeson, resulted in so great an improvement that at the end of one year it was his opinion that the pasture was in as good condition as ever.

The expense is very slight and it is hoped by the experiments being undertaken, to demonstrate the feasibility and practicability for adoption on most of the worn-out and over-stocked ranges in this region. As land increases in value, we should be able to make our pastures hold more cattle than ever before, and Harper County is to be congratulated in having this interesting experiment conducted here.

Test of Soy-Beans by Kansas Farmers in 1900.

PROF. H. W. COTTRELL.

The Kansas Experiment Station has received reports from 276 Kansas farm reports came from 72 counties. One hundred forty-nine farmers write that they raised soy-beans in 1900. These the soy-bean is a profitable crop, 44 have a favorable opinion, but need further trial, 34 report unfavorably, and 35 think the crop a total failure. The others did not express an opinion.

Most of the successful farmers plowed and harrowed their ground as for surface planting of corn, a few listed or double listed, either listing shallow or else harrowing the furrows nearly full. The Early Yellow soy-bean gave the best yield, only a few farmers having success with the late varieties.

The favorite method of planting was with a grain drill, stopping up all the holes but those that put the rows 32 inches apart, and dropping single beans 2 or 3 inches apart in the row. Corn-planters with drill attachments, and 1-horse corn drills were frequently used. Objections were made that corn-planters put the rows too far apart for best yield. The best yields were usually secured by planting as soon as corn-planting was finished. Several farmers in eastern Kansas report that with them beans may be planted any time before July 1. The same cultivation as for corn was usually given. Eagle-claw attachments and 5-toothed cultivators were frequently used.

The season was exceptionally unfavorable. Hot winds and drought from the time of blossoming to maturing, cut the crop short and shriveled the beans. This was immediately followed by heavy and long-continued rains that injured the beans in shock and stack. The worst pest was rabbits, the injury from them varying from slight to the destruction of every stalk on 11 acres. In some places soy-beans can not be profitably grown as long as rabbits are so numerous. Some injury is reported by grasshoppers and other insects.

The yields were from nothing to 31 bushels of grain per acre, and up to 2 tons of hay per acre, the hay being reported as nearly equal to alfalfa in value, and superior to clover. Most of the yields were from 12 to 20 bushels per acre. On the college farm soy-beans yielded 7.4 bushels per acre along side of Kaffir-corn yielding 20 bushels and corn a total failure.

Many reports show a failure of seed to grow. Soy-beans for seed must be kept in cool, well-ventilated bins, in thin layers. In buying seed, empty the sacks as soon as received and keep the beans spread out in a dry, cool place in a thin layer. A grower may send the best of seed, and yet if it is kept in the sacks until planting time, it will usually heat sufficiently to destroy its growing powers.

Satisfactory results are reported in feeding soy-beans to horses, mules, dairy cows, young stock, sheep, lambs, hogs, and poultry. Many farmers report that they have never fed anything equal to it, a few write that their stock could not be induced to eat either beans or hay.

The season was the most unfavorable for growing soy-beans but one that we have had in twelve years. The crop was a new one to most of the farmers raising it, and many mistakes were made. Good results were secured in this poor season and with a new crop by a majority of the farmers who reported, indicating that in an ordinary year most Kansas stock-raisers will find this crop profitable. We believe it will pay nearly every farmer in the state to plant 5 to 10 acres of soy-beans in 1901, and many farmers report that they will plant much larger areas.

The reports in detail as made by 276

farmers will be given in a large bulletin now in press.

Kansas Experiment Station.

Farming in Old Mexico.

EDITOR KANSAS FARMER:—The farming here is exceedingly primitive. The people use the wooden plow, pulled by oxen, yoked at the horns. They mark their corn-ground out both ways, punch a hole at the cross marks with a crowbar, drop the corn in the hole, and cover it up. String their wheat by hand along in the "mark" made by one of their plows and cover it by hand. Small grain is cut with a little crooked hand-sickle and tramped out by animals. Half of our land is allowed to lie idle each year, and a great deal of it is irrigated. Farming is largely restricted to the river valleys, though I see no reason why crops can not be grown on the upland. Much of the land is as fertile and nicely situated as could be asked for. The country is largely owned by a few individuals, and many of these are adopting modern methods, with great success. Some of the estates contain as much and more than 400,000 acres, and the proprietors would rather buy than sell. This will be a drawback to the development of the country. We have ordered nearly 400 bushels of seed, mostly cane and Kaffir-corn, and will plant about 40 acres, on each of about 10 ranches. These ranches are along the western terminus of the road and on the western slope at an elevation of about 6,000 feet.

I am well pleased with the prospects, and am quite confident of doing some good work. The people are interested—we furnish the seed and they the land and labor. The natural grass of the country is the much prized Gramineae, and it is cut and baled for hay. The reed stems are a foot to 18 inches high.

Chihuahua, Mexico.

J. G. HANEY.

Press Bulletin, Kansas Experiment Station.

ROOTS FOR KANSAS FARMERS.

A horse, a cow, or a sheep will thrive and do well on good pasture alone. Cut this grass, carefully cure it and feed the animal on hay alone. It will lose its appetite in a few weeks, become thinner and it will not have a thrifty appearance. The hay is a dry feed, the grass a succulent feed. If the best results are to be secured from feeding in winter, some succulent feed should be provided to take the place of the green feed of summer.

The cheapest and most convenient way of providing succulent feed is by corn silage. The next best way is with roots, and when a farmer does not have a silo he should raise roots. We recommend the growing by Kansas farmers of mangel-wurzels as the root crop best adapted to Kansas conditions. Sugar-beets are worth more, pound for pound, as feed, but the greater yield of the mangel overbalances this. The mangel is a coarse stock beet.

Mangels need a good, rich soil. Creek or river bottom is good, and the writer has seen 1,200 bushels per acre grown in a small, rich ravine on an upland farm. On most farms there is some rich, moist spot that is suitable for mangels. The ground should be prepared just as for a garden, deeply plowed and thoroughly pulverized just before planting.

PLANT TEN DAYS BEFORE YOU PLANT CORN.

This is very important. A later planting often results in a total failure of the seed to grow. The mangel grows fairly well in dry weather after it gets started, but the seed will not germinate unless the soil is thoroughly moist.

The seed should be planted in rows 30 inches apart, dropping the seed about as thickly in the row as for garden beets. At the Kansas Experiment Station we have found it most convenient to plant with a 2-horse grain drill having press wheels. We stop up all the holes in the drill but those from which we want seed to drop. About 6 pounds of good seed are required for an acre. Test the seed before planting, as much of it on the market is poor. Last spring we bought seed of two varieties of a leading seedsmen; only 10 per cent of one variety grew, while the seed of the other sort was all right.

The Long Red mangel yields the most, but it is not a good keeper. We plant it for feeding up to New Years. The Golden Tankard, if properly handled, will keep until June, and we plant this variety to furnish the supply of roots needed from New Years until spring.

Cultivate as for corn. We use a 2-horse spring-tooth cultivator, taking off the outside shovels. After the first cultivation, thin with a hoe to one plant every 6 inches in the row.

Mangels are a valuable feed to give

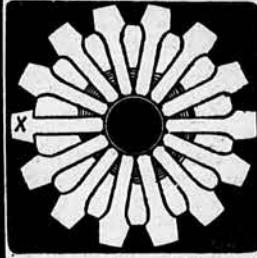
Don't Sell Your Farm, But Buy a Nichols & Shepard Threshing Outfit and Double Your Income.

Within a radius of five miles of you, there are 418 farms averaging 130 acres each. Each farm will produce an average of ten acres of wheat yearly. At 15 bushels per acre this would equal 150 bushels to the farm, or 62,700 bushels. Each farm will produce an average of 20 acres of oats. At 25 bushels per acre, this would equal 500 bushels to the farm, or 200,000 bushels. The threshing of this wheat at 8c per bushel would amount to \$1,881. The threshing of the oats at 1 1/4c per bushel would amount to \$3,125. A grand total of \$5,006 for threshing wheat and oats alone, to say nothing of rye, barley, buckwheat, etc., and the hulling of clover. Certainly a handsome income in addition to the proceeds of your farm. We know of no reason why you may not enjoy a fair portion of it if you will. Then, too, you may use the Engine in combination with a corn husker and fodder shredder after the threshing season is over. Or you can attach it to a saw mill. Or you could buy a power grinder and do custom grinding for the entire neighborhood. Oh, there are many ways in which you could make money out of such an investment. Write us. Look into the matter before another season rolls around.

Nichols & Shepard Co., Battle Creek, Mich.

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H. M. COTTRELL.

The Disc Plow.

EDITOR KANSAS FARMER:—I notice in the KANSAS FARMER of March 7, the inquiry of R. Harold in regard to the disc plow. I bought a disc plow last August because the ground was too dry to plow with the common plow. I managed to plow 40 acres in early September that I could not have plowed with any other plow, and at this time I am having a fine pasture that would have been in stubble had it not been for my disc plow. I have looked upon the disc plow as a kind of a luxury, but when my 40 acres yield me from 20 to 25 bushels of good wheat per acre, I am inclined to call it my particular friend. There is quite a number used in this section, and everyone likes them. They

seem a little awkward at first, but when you get used to them they are all O. K.

Omega, O. T.

Has Used Land Plaster.

EDITOR KANSAS FARMER:—Agreeable to a request from Prof. E. Haworth, as to what I know or rather my experience in the use of land plaster or cement plaster, I would say, I have used plaster in Michigan and New York. It is used there on grass at the rate of 200 to 300 pounds to the acre, and on corn at the rate of a large spoonful to a hill after the corn is up. On grass where the plaster was applied, no matter how dry the season was, there was a good growth, and where there was no plaster there was no grass or clover, and on corn one could see, to a hill, where the plaster had been used. This is why I think it would be a grand thing in Kansas as well as Missouri. I am going to use some this season, and if it proves to be as good here as in Michigan, I shall undoubtedly use it in the future, for I am sure it will make half or more in the amount of crop raised in a dry season.

L. M. SAGEE, Maysville, Dekalb Co., Mo.

The Stock Interest.

THOROUGH-BRED STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.
 October 8-10, 1901—American Berkshire Association Sale at Kansas City.
 December 10, 11, and 12, 1901—Armour-Funkhouser, Herefords, Kansas City.
 December 18, 1901—H. O. Duncan, Shorthorns, Kansas City.

Horse-Breeding in the Last Thirty Years.

ALEX. GALBRAITH, JANESVILLE, WIS. (SECRETARY OF THE AMERICAN CLYDESDALE BREEDERS' ASSOCIATION.)

The changes and advances made by breeders of domestic animals in the last twenty-five or thirty years, are not greater in any class of stock than in horses. Within my own recollection a distinct evolution in the tastes of breeders and demands of the market is clearly noticeable, and in no breed does this apply with greater force than to the British draft breeds of Clydesdales and Shires. I can well remember, when a small boy on the farm, a rather noted Clydesdale mare which my father owned. She was named old Jess, and was sired by a son of the celebrated Broomfield Champion (95). This mare was the dam of many fine colts—one of which, Johnnie Cope (416), won the Highland Society's first prize at Glasgow forty-four years ago, and that season sired the celebrated black horse, Campsie (119), the winner of many premiums in Scotland and one of the earliest horses owned by the well-known David Riddell.

CLYDES HAVE CHANGED.

The old mare, Jess, to which I refer, differed in every material point from the typical show Clydesdale mare of the present day, in fact she resembled far more closely a characteristic Shire mare. She was large, approaching, if not quite, 17 hands high; very powerfully made all over, with immensely heavy bone, not of the neatest or cleanest kind, but such as would appear to good advantage when measured with a tape line. She had wonderfully heavy feather of a quality in keeping with her immensely heavy frame—in other words, rather coarse, hard, wiry hair. She had never been worked on the farm, although she lived to be over 20 years old. She had, I suppose, a mind far above ordinary farm work, as she was considered and looked up to as a model mother of stallions.

Contrasting that animal with the typical Clydesdale mare of to-day we find the difference very marked indeed. The weight of bone and frame has very materially decreased—the quality and the action have correspondingly increased. The dams of such horses as MacGregor or Baron's Pride were but small mares compared with Old Jess, or even with Keir Peggy, the dam of the famous Darnley. I well remember seeing Keir Peggy win first prize at the Highland show in 1864, and I saw the same mare twenty-two years afterwards, and I still think her one of the grandest animals the breed has ever produced. She had considerable scale, a fair amount of quality, very symmetrically formed, with good action, but the most remarkable thing about this mare, and which has been a hard problem for Clydesdale breeders ever since, was that by far and away the best colt she ever produced, and she produced ten in all, was sired by an undersized and rather inferior stallion. This stallion's name was Conqueror ('99) owned by Mr. Moffatt, of Shirva, and I well remember that when the horse was hired at the Glasgow spring show of 1871 by the Dunblane, Doune & Callander Farmers' Club to travel their district for small terms, the wisecracks laughed at the incompetency of the committee for choosing such a horse. Sir Wm. Stirling Maxwell's estate of Keir being in the district, the manager thought he might perform a generous act by sending one of their many mares to the district horse, and I understand the reason why Keir Peggy was the one chosen was because she had failed to get with foal to any of their own stud horses, and they had several of considerable note. At any rate the result was that Keir Peggy got with foal by this obscure horse and in due time produced the world-famed Darnley, probably the greatest Clydesdale of the 19th century. It seems the irony of fate that such a wonderful product should be brought about in this haphazard manner. The mare was afterwards bred to many excellent horses, but never produced anything at all equal to Darnley, either for individuality or breeding qualities, although two of them were good enough

to win at the Highland show. So much for this digression.

GOOD FINISH.

Sally, the dam of MacGregor, was a decidedly undersized mare, but had nice quality and shape and seemed to rick especially well with Darnley, as she afterwards produced the champion Flashwood—a horse of abundant size and beautiful finish—the best show horse of his time. But although this mare and the dam of Baron's Pride were smaller in size and in bone than the old timers referred to, they were much superior in quality, much finer in hair, much better in feet, more elastic in pasterns and superior in action. So much so, in fact, that the change wrought in those thirty or forty years in the typical Clydesdale can not possibly be regarded as otherwise than a decided advance and improvement.

The same refining process has taken place and continues to-day in other breeds. It is based on experience and practical knowledge. It is not a fad, but a felt want. The animal of better quality—whether in horses, cattle, sheep, or hogs—is preferred the world over to the heavier, coarser, more phlegmatic animal, and why? Because fineness of quality, as indicated by a bright eye, a dense bone, thin skin, and silky hair, is synonymous with wearing qualities, endurance, and early maturity. They are apt to be easy keepers and good feeders, and they frequently have more ambition and more intelligence as well.

REFINEMENT AND SIZE.

Now, this question may be put: Has the refinement of the Clydesdale and other draft horses been an unmixed good, or has it really been to the advantage of those breeds to attain this increase of quality at the expense of weight? I am willing to admit that in many cases the tendency has been overdone. Some ten years ago I attended a dinner at the home of Professor McCall, near Glasgow, and there met some 25 or 30 representative Clydesdale breeders. I was asked to give my views as to the standard of Clydesdale excellence then in vogue, as exemplified in the show rings. I told those breeders that they had been, and were then, making a very serious mistake in ignoring size and substance in their breeding operations, that they were giving entirely too much prominence to feet and pasterns and not sufficient attention to the necessity of keeping up the bone and muscle and substance so essential in the ideal draft horse. I said further that in my judgment they would suffer seriously within a few years from the importation and competition of American and Canadian grade draft horses—this was previous to the date of heavy importations from this country—horses not heavy enough perhaps to draw heavy lorries, but suitable for light lorries, vans, and omnibuses; and I said that a large proportion of the horses which they themselves were then producing, were of a similar class and would consequently have to be sold at very low prices. A few of those present, including Professor McCall and the editor of the North British Agriculturist agreed with my statements, but the great majority did not like to be told that they were on a wrong track. I knew I was right, but they felt sure I was wrong. The matter was discussed at length in the papers both in Scotland and in America. Col. Holloway undertook to show the fallacy of my conclusions in two long and very ably written letters to the Breeders' Gazette. He maintained that feet and pasterns were the one great essential in the draft horse, and that the body and weight would take care of themselves.

Now, what was the result? During the years of depression in the horse business, American draft horses were poured into England and Scotland, and their home-bred, undersized Clydesdale could not be sold at anywhere near the price obtainable for animals of substance and weight, and even to-day in the Chicago market, the price is largely determined by the weight, provided, of course, that the fundamentals—the legs, pasterns, and feet—are all right. My contention now, as always, is that any craze or fad is temporary, and therefore dangerous to follow, and utility must go hand in hand with fashion. Had Col. Holloway kept size in view as well as he did the underpinning, it would have placed many thousands of dollars in his pockets, and the country would also have been the richer by having much more valuable animals.

During the last six or eight years the improvement in the weight of Clydesdale horses has been very marked, and on the whole we cannot possibly come to any other conclusion than that the breed has advanced very materially during the last twenty or thirty years. This fact is evidenced by the constant

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demand for breeding stock from foreign countries, such as Germany, Russia, Sweden, Australia, New Zealand, and the Argentine Republic, in addition to Canada and the United States.

SHIRES.

Now, as regards Shire horses, I think there has been quite as great an improvement in the last thirty years as in Clydesdales. The type of Shire that won at the London show twenty years ago would have no chance now—the refining process being most marked in this breed. This improvement has been brought about partly by the organization of the Shire Horse Society and its annual shows, accompanied by veterinary inspection, but principally through the efforts of a mere handful of progressive breeders, who, to tell the truth, took their cue from the Scotch breeders, and have been endeavoring all these years to remedy the defective limbs and feet and faulty hock action of the massive English horses. The average Shire breeder still maintains with remarkable persistency that the more bone and hair he can produce the better the animal, but this claim is by no means confirmed either by the show rings or the market, unless the animal possess considerable quality and activity. It is frequently found that the extremely strong-boned, hairy-legged horse, whether Clyde or Shire, has a distinct element of softness in his composition, is phlegmatic in temperament, and is neither so active nor so enduring as the horse with less hair and finer skin. How often have we seen big, rough, strong horses that, when three years old, looked like six, and when six looked like sixteen, if they happened to be alive. Such horses never have been and never can be popular in the United States. The Americans always insist on having a certain amount of quality and cleanness in their horses' legs, and, as they are for the most part poor caretakers of heavy draft horses, a gummy-legged Shire going into a district ruins the reputation of the whole breed wherever that horse is known.

MEDIUM WEIGHT.

But, I think I hear some one ask very pertinently, how are you going to raise those heavy-weight geldings which all the markets demand at good prices, unless by using very heavy sires? The question is somewhat difficult to answer, but I would remark that it is not by any means the heaviest horses that prove the best breeders, and I could cite many cases to prove this. The medium-sized horse of good bone and constitution, whose immediate ancestors on both sides were animals of high merit, is in my opinion a safer animal to breed from, than an accidentally large horse whose parents were much smaller than himself. Depend upon it, the most unsatisfactory sires are the abnormally large ones. They are accidents themselves, and they will breed accidentally. Another point in this connection. Good draft mares are quite as essential to the production of market geldings as are the stallions. The day has gone by when by coupling a 1,200-pound mare with an 1,800 or 2,000-pound stallion, you can expect a high-class draft gelding. The mares ought to weigh at least 1,500 pounds, and if 1,700 pounds, all the better. It is a safe axiom in all countries, when once you find a good brood mare, stick to her as does the Arab.

LIGHTER BREEDS.

Passing on now to the lighter breeds, I will take up shortly the Cleveland Bay, or Yorkshire coach-horse. This breed, as you doubtless all know, was

extensively used in England during the days of the stage-coach, but on the advent of the railways, the breed became practically extinct until some twenty-five years ago, the American craze for solid bay horses of rangy type, with flowing tails, resuscitated the breed and brought them into great prominence in the United States. The demand for these horses increased wonderfully, and all sorts and conditions of them were imported for a good number of years and freely distributed from the Atlantic to the Pacific. I am not here to advocate any breed, nor yet to disparage any, but the fact remains that the crossing of the Cleveland Bay horse with American mares proved a most dismal failure. There is at present positively no demand whatever for the Cleveland Bay breed, and instead of being popular, as they once were, they have fallen into innocuous desuetude. Probably some blame may be attachable to the farmers who very foolishly insisted on crossing their grade draft mares with those Cleveland stallions—a very unwise and objectionable cross, certainly—but it may be stated broadly that for every imported stallion whose stock turned out satisfactorily there were ten that proved a disappointment. I think myself that a good, well-bred Cleveland Bay horse, not too large nor heavy-boned, but with considerable quality and action, and such could occasionally be found, would, when judiciously crossed with fine trotting-bred mares or mares having a dash of thoroughbred blood, produce some excellent carriage horses, and I have seen a few of that class; but, speaking generally, the Cleveland Bay horse in America has not been in any sense a success.

HACKNEYS.

The Hackney horse was not imported in any numbers until just before the depression of 1893, and therefore had not the same chance to make a reputation as the Cleveland Bay. A strong and general prejudice existed against this breed on account of his size, and this prevented a liberal patronage of those earliest imported stallions, especially in the Middle and Western States, where the great bulk of American horses are produced. Those owned in the East (and nearly all the best bred and most valuable Hackneys were in the East) were in the hands of very wealthy men, and as the service fees for most of them were necessarily high, they were beyond the reach of the average farmer. The results, therefore, were not so beneficial as they would have been had those horses been standing at a fee within the reach of the ordinary farmer. Notwithstanding this drawback, the popularity of the Hackney steadily increased and he was hailed by many of the best horsemen in the United States as by far the greatest improver of our light harness stock. Wherever the Hackney has been judiciously crossed he has proved a splendid success, and many half-breds have distinguished themselves in harness at the principal shows on this continent. I would recommend the same class of mares for crossing with the Hackney as with the Cleveland Bay, but the Hackney is much the better and more prepotent horse, and is specially adapted for improving our harness horses in the very points where they are weakest—in strength, constitution, rotundity and action. The only unsatisfactory results I have ever observed from the use of the Hackney were in the case of them being crossed with grade draft mares and this would apply with even greater force to the other coach breeds, both English, French, and German, but where judiciously mated, the well-bred

Hackney more than any other breed certainly has the ability to improve and ameliorate the condition of the American light harness horses.

COLOUR AND MARKING.

The principal changes in the Hackney horses of thirty years ago, as compared with those of the present day, are that chestnut colors with flash white markings are much more prevalent now than then, and there has been during that time a general increase in the height, of probably two or three inches. The latter change is the result of public sentiment and is in the right direction. The only vulnerable point in the genuine Hackney yet is the lack of height, not weight, and I am glad this is being gradually remedied. The chestnuts with white legs so frequently seen in the leading show rings of England are mostly the descendants of that magnificent sire, Danegelt, who attained a celebrity and fame which has not been approached by any other horse in the breed. Twenty or thirty years ago the prevailing Hackney color was solid dark brown. The great sires, Lord Derby 2d, Truefitt's Fireaway, and Doyley's Confidence left the great bulk of their stock of that rich dark color, but the influence of the more fashionable Danegelt and his sire Denmark, both of whom were chestnuts, so predominated that nearly three-fourths of the best Hackneys to-day are of chestnut color, and many of them have so much white on face and legs as to be quite objectionable to foreign buyers. Americans are sticklers for color. The late Mr. Dunham, probably the ablest and most successful horse breeder in the United States, told me one day that he deplored this American craze for solid colors, as it compelled him to import from France inferior black Percherons and leave behind superior greys—the latter being the natural color of the Percheron horse. All Shorthorn breeders know the injury wrought to the breed years ago by discarding all roans, however good, in favor of red colors. Black is at present the most popular color among draft horses in the United States, but five or ten years hence it may be grey, bay, or chestnut. Who can tell? Twenty years ago the typical Percheron horse, as imported into the United States, was a grey, usually a dappled grey, with fairly heavy bone, short hind quarter, chubby neck, and, although showy, vigorous, and lively, with fairly good action, was far from being symmetrical in his general outline. To-day we see hardly anything but blacks, with lighter bone but better necks and hind quarters—a handsomer horse, but possibly not a better one for draft purposes.

The other draft breeds—the Suffolk Punch and the Belgian—have not to my observation changed noticeably in that time, unless it be that the Suffolk breeders have paid increased attention to the feet of their horses and have improved them materially in that respect while preserving their splendid bodies and excellent constitutions.

NO YEARS FOR THE FUTURE.

The periodical spells of depression which visit the United States every twenty years or so seem to come with unfailing regularity and then the breeder of horses had better look out in advance and get his house in order. The panic of 1873 affected the prices of horses very seriously, and it was nearly five years before they had fully recovered. Then, in 1893, from a combination of causes—the chief of which were indiscriminate overproduction, the advent of the bicycle, electricity in street cars, and the general industrial depression—the prices of all kinds of horses in the United States fell to an unprecedentedly low figure and continued low for three or four years, during which time very few horses were being bred. When business improved and the scare of an alleged horseless age had passed by, it was found that there was actually a decrease of three million horses in the country, and then prices advanced gradually to the present rates. For the future the Canadian or American breeder need have no fears, provided he uses good judgment, feeds his young stock liberally, and avoids the rocks and shallows of indiscriminate breeding.

SUMMARY.

In summing up I will state my opinion to the effect that in every breed of horses now being raised in Great Britain, and probably in Canada and the United States also, there is more care, skill, and intelligence brought to bear on the matter than at any time in the past, and that the changes which have undoubtedly taken place in the various breeds during the last thirty or forty years, have all been the result of increased knowledge and wider experience, and are in the main a distinct benefit to the respective breeds. The new

century will open up problems of breeding yet to be solved by the most skillful breeders of the present day, the successors to those noted pioneer breeders I have referred to, and it behooves the present generation to take up the work earnestly and try, if possible, to improve upon the best products of the 19th century as bequeathed by our forefathers.

How It is on the Range.

EDITOR KANSAS FARMER:—Real estate is on the rise, or it was for three days with old March straddle of the house and hooting, and everybody south of everybody north got their feed, as it just blew away. But cattle look fine down here. I wish all the boys could see the little blood red calves that are being dropped all over the fields, from that grand bull, Prince of Fashion, which Frank Foster, of Mitchell, sent me last year. Can not tell one from the other. When these little calves drop, they wink and blink, get their eyes open, jump up and suck and suck, get full and go kicking and "smashing" around and have lots of fun. Mrs. Nation has gone from the range (and we can't find her). We are afraid she will go smashing around some town and get in the "pound." If you find her we advise you not to get out of the saddle or she will make you climb a tree.

Chet Long, that kid of Medicine Lodge and ours, has got way up on the Washington range, smashing laws around, won't come home. Got Jerry Simpson home, been on the range so long he is not much account, has chucked \$16,000 in his jeans, that he got for his ranch and cattle, going to Wichita now and get in the shade. Another of our boys, Tom McNeal, we hear is in your city. Start him home, please, if there is a "breeze" and he has his "mail." Why I have seen the time when he would have been thankful to chew for a meal, the string that holds a ham up in a smokehouse. Now we hear he is wearing dude's clothes. But he is all right, so are Chet and Jerry and all the Medicine Lodge people.

Got some oats sown, will start to planting corn this week and fire it in as fast as possible. The grass is getting green in the canyons. Have to drive the cattle to their feed every morning. Feeding steers sell high and are scarce, native cows sell from \$30 to \$42.50 per head, native calves \$16 to \$22, hogs \$5 per hundred, corn 30 cents per bushel, oats 30 cents, feed \$3 to \$4.50 an acre; land the same price, and never will be so cheap again.

The boys who went to the strip and Oklahoma are selling out down there and coming home and buying farms here for just half the price they sold for down there. I can not understand that, when Kansas is the best state in the world, and when our boys leave it, they get back just as soon as they possibly can and down here where the buffalo used to winter is the best place of all. But it is a cattle country. Feed, cattle, and hogs are all that are safe, for we fail on raising grain sometimes. Medicine Lodge. ELI BENEDICT.

Live Stock Sanitary Regulations.

At the meeting of the Kansas Live Stock Sanitary Commission, March 22, the following regulations were promulgated:

"Rule 1. That part of the stockyards of Kansas City west of the Kaw River and known as the quarantine division together with all chutes and approaches thereto, is hereby set apart for the reception and handling of southern cattle, and such other cattle as arrive at the Kansas City stockyards in violation of the sanitary rules and regulations of this commission.

"Rule 2. Each car carrying cattle and carrying the same in the course of transportation from said infectious area into or through the state of Kansas, must have a placard firmly attached, stating in bold letters, 'This car contains southern cattle' and the waybill of the said car shall have marked plainly on the face thereof the words, 'Southern cattle.'

"Rule 3. On unloading southern cattle at points of destination, or for feed, water and rest, at any stockyards in Kansas, certain chutes, alleys and pens must be set apart for their exclusive use, and whenever any southern cattle that have been unloaded in Kansas shall be reshipped to other points of destination, the cars in which said cattle are to be reloaded must be placarded and waybills thereof, marked plainly, 'Southern cattle.'

"Rule 4. Cars that have carried southern or infectious cattle shall be thoroughly disinfected before being loaded with non-infectious cattle. All litter and manure taken from the cars



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when disinfected must be stored where no cattle can come in contact with it, or so treated as to destroy all means of infection.

"Rule 5. Where a pasture lies on both sides of quarantine line, all of said pasture shall be treated as being south or below said quarantine line described in the governor's proclamation. In pastures or upon ranges where ticks (*boophilus bovis*) are known to exist and where in the judgment of this commission said ticks, owing to favorable conditions, are likely to live through the winter season, said pastures shall be placed in quarantine and no cattle allowed to run in said pasture from the first day of April until the first day of October; the pasture may be used, however, for the range of other animals.

"Rule 6. The laws of 1901 expressly forbid the introduction of cattle into the state of Kansas from any point south of the south line of the state of Kansas, being the thirty-seventh parallel of north latitude, without inspection, except for immediate slaughter, and then only under such rules and regulations as may be prescribed by this board.

"Therefore, all cattle introduced or brought into the state for any other purpose than immediate slaughter must be first carefully inspected by a member or inspector of this board and a certificate of health issued by such inspector or member of this board showing that the cattle have been inspected and found free from fever ticks (*boophilus bovis*), that the inspection fee prescribed by law (two cents per head) has been paid, the name of the owner and the person in charge of said cattle, and the point of origin and the place of destination, and such certificate shall be evidence that the owner or person in charge of the cattle therein described has a right and is authorized to introduce and bring such cattle into the state of Kansas. One copy of said certificate must be attached to waybill stub accompanying such cattle. Any person desiring to bring cattle into the state of Kansas for immediate slaughter which would, if brought in for any other purposes, be liable to inspection and the payment of fees provided by law, may on application to any member of this commission or any of its inspectors, duly appointed and commissioned as such, receive a certificate from such commissioner or inspector, which shall state the place of origin of said cattle and a description of the same, including marks, brands, and name of owner and the person in charge thereof; that the same are shipped for immediate slaughter and have not been inspected and the person holding such certificate shall be entitled to have the cattle therein described unloaded in any established quarantine yards in the state of Kansas and under such quarantine regulations as may be, from time to time, established by this board governing the shipment of cattle in this state for immediate slaughter, and a copy of such certificate must be attached to waybill stub accompanying such cattle. Any cattle offered south of the thirty-seventh parallel of north latitude, for shipment through the state of Kansas to points beyond the state, will not be permitted to unload for feed and rest within the state outside of regular quarantine yards established and maintained under directions of this board, unless they have first been inspected as other cattle for shipment in this state and awarded a like certificate of health upon the same terms and conditions as though their destination was some point within the state.

"Rule 7. An agent for the state of Kansas shall be appointed by the Live Stock Sanitary Commission for any public stockyards whenever said commission shall deem such agent necessary to protect the health of the live stock of the state and to prevent the spread of contagious diseases. Such agent shall be paid by the owners of the stockyards where he may be located. His compensation shall be fixed and his



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duties prescribed by the Live Stock Sanitary Commission of Kansas.

"Rule 8. It shall be the duty of the managers or persons in charge of any stockyards in Kansas to keep the said yards in proper sanitary condition for the protection of the health of live stock entrusted to their care, and to cleanse and disinfect all yards and pens, chutes and alleys, at such times and in such manner as may be deemed necessary by this commission or its authorized agents.

"Rule 9. The townships of Garden, Lowell, and that portion of Spring Valley described as follows, to-wit: All of township 35, and sections 23, 24, 25, 26, 35 and 36 of township 34, range 24, east, all in Cherokee County, Kansas are hereby specially quarantined, and no cattle shall be admitted to other parts of Kansas or to the state of Missouri from above-named townships, except they shall first be inspected by an agent or inspector of this commission, and found to be free from fever ticks (*boophilus bovis*), and when allowed to go shall be accompanied by a permit issued by said agent or inspector. Cat-

the coming from Missouri if accompanied with health bills required by the sanitary board of said state shall be admitted to Kansas without further requirements.

"Rule 10. The counties of Jasper, Newton, McDonald, Barry Stone, Taney and Ozark and the township of Thayer in Oregon County, all in the state of Missouri, are deemed and shall be considered, infectious territory, and the cattle therein shall only be brought into the state of Kansas upon the terms and conditions prescribed by rule 6 of these regulations, provided, however, that the fee provided by law and referred to in rule 6 of these regulations may be paid to the state board of agriculture of the state of Missouri or its representatives and a certificate of health thereupon issued, in substance and form as prescribed in rule 6 of these regulations, shall be accorded and have like effect as though issued by this commission or its inspectors, and in such cases it will be the duty of the person issuing such certificate to notify this commission of such inspection and remit the fees collected therefor.

"Rule 11. All railroads, live stock transportation and stockyards companies and their employees, and all other persons, are hereby forbidden to transport, drive or in any way handle cattle in Kansas, except in compliance with the foregoing rules, under the pains and penalties of the following statute:

"Extract of chapter 2, session laws of 1884: Sec. 21. Any person who shall violate, disregard, or evade, or attempt to violate, disregard, or evade, any of the * * * rules, regulations, orders, or directions of the Live Stock Sanitary Commission establishing and governing quarantine, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined in any sum not less than \$100 nor more than \$500.

"By an act supplementary to and amendatory of chapter 139 and chapter 142 of the general statutes of Kansas, 1897, the collection of a fee for the inspection of cattle is now a statutory law of Kansas, and all money so collected is paid into the state treasury.

"The affidavit feature of the rules and regulations has been abandoned and none will be required upon any shipments."

The following inspectors were appointed:

Kansas City stockyards, Joe Green, Wyandotte; Fort Worth stockyards, John H. Johnson, Jackson; Amarillo, Texas, stockyards, Whit Adair, Chase; Southern Kansas Railway from Kiowa to Amarillo, D. R. Streeter, Barber; Hunnywell and Arkansas City, L. Musgrove, Sumner; Rock Island Railroad in Oklahoma, A. M. Colson, Sumner; linerider to patrol southern border of the state from the Missouri line to Arkansas City, Charles E. Collins, Cherokee.

Angoras and Sumac, Elder and Buckeye.

EDITOR KANSAS FARMER:—Would like to ask Mr. R. C. Johnston, of Lawrence, or some other breeder of experience, whether the Angora goat is equal to the task of exterminating sumac, elder, and buckeye brush? Mr. Johnston in his recent paper before the state board of agriculture says these animals are "tickled to death" when they strike a patch of jimson weed, and it would seem the above-named shrubs should rank as delicacies in such a bill of fare. The buckeye brush prevents the early use of some pastures here on account of the poisonous effect the buds have on cattle. Can the goat go there?
Garnett, Kans. E. F. GREGORY.

ANSWER BY MR. JOHNSTON.

Angora goats are exceedingly fond of sumac and elder. I have no buckeyes on my farm, but I have no doubt they will eat it without poisoning them, as I never heard of it injuring them. In sixty days from now, I can tell you positively what effect it will have on them, as I sold some goats for the very purpose of cleaning some brush land that contained 304 acres of buckeye brush. Lawrence, Kans. R. C. JOHNSTON.

Allendale Aberdeen-Angus Sale.

Many of our readers may not be aware that the largest and oldest and probably finest herd of Aberdeen-Angus cattle is located in this state. We refer to the Allendale herd of Anderson & Findlay, in Allen County, Kansas, whose advertisement appears in the columns of this paper. This herd was established at Lake Forest, Illinois, in 1878, by an importation of 1 bull and 5 females, the first females that were ever brought to the United States. It was maintained for many years at Lake Forest, and there built up the fine reputation that it enjoys throughout the country. The land it was kept on became too valuable through the demand for country residences for the Chicago people, and the owners were induced to move their

herd to their farm in Allendale, this state. There are about 800 head of registered animals in this herd, and no breeding cattle but pure-bred and registered animals are maintained on the farm. Many of the finest herds now in this country were founded by animals from this herd, and most of the bulls from which have come the famous X. I. T. grade Aberdeen-Angus cattle were furnished from this herd, and the owners of this herd were gratified to see the champion bull of 19.0—Orn of Long Branch—sold at the Escher Dispersion in Chicago this month for the highest price of any bull sold there. He brought \$1,300 and was the great grandson of Violet of Brucehill 1861, one of the 5 females imported in 1878, above referred to.

The owners have shown great care and enterprise in maintaining their herd, being especially careful as to the sires used in the herd. The bulls now at the head of the herd were recently imported from Scotland, and are of the finest blood and from the best herds over there. While they are all good, especial mention might be made of the Pride bull, Pacific, from Col. George Smith Grant's herd, and the Erica bull, Elberfeld, from Sir George MacPherson Grant's herd. The bulls of this importation are doing excellent work in the herd, 32 calves have already been dropped this season, and they are almost without exception splendid specimens of the breed.

The late Queen of England was a lover of this breed and maintained a herd in Scotland. The owners were fortunate in their last importation in securing a bull from her herd. Her son, King Edward VII, appears, to use his own words, to "walk in the footsteps of his mother" in this respect as well as in the affairs of the nation at large, having purchased a fine Erica bull, Elandslaagte, at the Perth, Scotland, sale last month, from Sir George MacPherson Grant of Ballindalloch, for 220 guineas (about \$1,100).

The owners report recent sales as follows: To John Kennedy, Menard County, Texas, 1 heifer and 2 bulls; D. C. Ogden, Menard County, Texas, 3 heifers; G. O. Creswell, Menard County, Texas, 5 bulls; Stokes & Dunton, Comanche County, Kans., 1 bull; J. Frather, Wilson County, Kans., 1 bull and 3 heifers; Chas. Seeburger, Allen County, Kans., 2 heifers; Brown Bros., Woodson County, Kans., 1 bull; A. G. Skinner, Coffey County, Kans., 1 bull; Robert Davis, Champaign County, Ill., 1 cow; Tony Schoaf, Shelby County, Ind., 1 cow and calf; T. A. Fletcher, Indianapolis, 1 bull and 2 heifers; J. P. Hine, Erie County, Ohio, 1 bull; J. W. Reed, Boone County, Ind., 1 bull; W. G. Denton, Doniphan County, Kans., 3 heifers; A. J. Estep, Allen County, Kans., 1 bull; Rev. S. M. Neel, Kansas City, Mo., 1 bull; Jas. N. Holden, Wichita County, Kans., 1 bull; J. D. Hester, Anderson County, Kans., 1 bull; Bidwell & McDowell, Anderson County, Kans., 1 bull; to a pool of cattlemen in Grant and Stanton counties, Kans., organized by that excellent judge of cattle, Capt. Thos. W. Swinney, composed of the following: Capt. T. W. Swinney, 2 bulls; Geo. Bosler, 1 bull; R. R. Wilson, 1 bull; Wm. Humphrey, 2 bulls; Chas. W. Cox, 1 bull; L. Binnie, 1 bull.

Capt. Swinney is deserving of great credit for his efforts to grade up the class of cattle in his section of the country, and these bulls selected for his pool were declared by competent cattlemen to be the finest animals ever taken into western Kansas.

There are some splendid young bulls remaining at Allendale, and those in need of such or in need of heifers might do well to look this herd over.

The Aberdeen-Angus Combination Sale.

On March 20 and 21, the first combination sale of Aberdeen-Angus cattle was held at the first stock pavilion at the stock yards at Kansas City. This offering consisted of consignments from the well-known herds of C. H. Gardner, Blandinsville, Ill.; M. A. Judy, Williamsport, Ind.; Thos. Mattison, Jr., South Charleston, Ohio; and W. B. Seeley, Mt. Pleasant, Iowa. The sale was under the management of W. C. McGavock, Mt. Pleasant, Ill., who has so successfully managed the leading Aberdeen-Angus combination sales of the country.

The sale was well attended, but buyers were conservative and did not pay fancy prices, but aimed to buy animals worth the money. The females sold readily at good prices, but the bull offering was too large for the class of buyers and lower prices prevailed; 59 cows and heifers sold for \$16,640, an average of \$282.03, and 45 bulls sold for \$9,395, an average of \$208.73. One hundred and four Aberdeen-Angus cattle sold for \$26,035, a general average of \$250.33.

The lowest price for bulls was \$90, for females \$115. The top price for bulls was \$505, for females \$650.

C. H. Gardner sold 9 bulls for \$1,430, an average of \$159, and 18 heifers for \$4,465, an average of \$248.05, making an average of \$214.63 on 27 head. The top notch price realized by Mr. Gardner was \$400, for Gardner Favorite F. 36620, a 2-year-old heifer, which went to M. P. & S. E. Lang, Carlock, Ill.

M. A. Judy's consignment made the highest average of the combination; 37 head sold for \$10,360, an average of \$288.10; 17 bulls averaged \$262.65, and 20 females averaged \$309.75. Mr. Judy received the top notch prices on both bulls and females in the sale of the Blackbird bull, Blackbird Teddie 39202, calved August 23, 1899, sold to H. H. Anderson, Alpha, Mo., for \$5.5. The highest prices for females during the two days' sale were for his Blackbird heifer, Blackie 15th 39201, calved August 20, 1899, sold to C. H. Gardner, Blandinsville, Ill., for \$650, and the Heather Bloom cow, Dorcas F. 23362, calved February 19, 1895, sold to A. H. Eymann, Harristown, Ill., for \$605.

Thos. Mattison, Jr.'s consignment consisted of 12 bulls and 15 females, which sold for \$5,760, an average of \$213.33; the bulls averaged \$141.25, and the females, \$271. His top price was for the Maggie cow, Maggie Estill 2d 17435, calved November 12, 1892, and sold to B. R. Pierce, the owner of the champion steer, Advance, Creston, Ill., for \$500.

W. B. Seeley's consignment sold consisted of 6 bulls and 7 females, which brought \$2,385, an average of \$183.46; the bulls averaged \$141, and the females \$220. His top price was for a Westtown Rose cow, Rose 2d of La. Crew 30248, calved June 14, 1898, sold to W. O. Park, Atchison, Kans., for \$500.

The following is a complete list of the purchasers of cows: W. T. Barron, Fayette, Mo., 2 head; W. O. Park, Atchison, Kans., 2; Carpenter Bros., Burlington, Kans., 2; E. A. Berry, Waterville, Kans., 7; L. McWhorter, Aledo, Ill., 2; L. M. Stauts, Lebanon, Ill., 2; Geo. Stevenson, Waterville, Kans., 5; Geo. Peppe Mt. Carmel, Iowa; A. H. Eymann, Harristown, Ill.; W. W. Morse, Albion, Neb.; R. S. Williams, Liberty, Mo.; C. D. Hooker & Son, Maryville, Mo.; Jas. A. Sheehan, Bogard, Mo.; Omer Catterson, Maryville, Mo.; M. A. Judy, Williamsport, Ind.; H. E. Curtis, Rhter, Kans.; H. D. Morris, Stockport, Iowa; L. W. Turpiny, Carrollton, Mo.; W. L. Grayson, Grayson, Mo.; Silas Igo, Palmyra, Iowa; M. P. & S. E. Lang, Carlock, Ill.; Geo. Barron & Sons, Fayette, Mo.; Jno. F. Coulter, Excello, Mo.; C. H. Gardner, Blandinsville, Ill.; J. R. Hughes, Fayette, Mo.; Geo. Calloway, Lexington, Mo.; S. C. Gill, Prairie, Mo.; W. W. Andrews, Maryville, Mo.; S. A. Davis, Readsville, Mo.; Geo. Schall, Lexington, Mo.; J. A. Creswell, Gentry, Mo.; B. R. Pierce, Creston, Ill.; H. E. Hilpert, Stanford, Ill.; E. O. Farke, Waterville, Kans.

The following is a complete list of the purchasers of bulls: Thos. Mason, Industry, Kans.; H. B. Morris, Stockport, Iowa; M. L. Clardy, St. Louis, Mo.; Chas. Knabb, Hiawatha, Kans.; H. E. Hilbert, Stevensville, Ill.; Young Bros., North Bend, Neb.; J. W. Austin, Tlna, Neb.; H. H. Anderson, Alpha, Mo.; W. L. Culbertson, Grayson, Mo.; J. K. Bean, Seaton, Ill.; R. D. Williams, Liberty, Mo.; Jas. Rhoades, Bethany, Ill.; Jas. A. Sheehan, Bogard, Mo.; R. Williamson, Mitchellville, Iowa; Samuel Detwiler, Hiawatha, Kans.; J. N. Wright, Liberty, Mo.; W. W. Morris, Albion, Neb.; Jno. K. Drummond, Jamesport, Mo.; E. E. Leipengood, Hawatha, Kans.; Lewis Burriss, Orangeburg, Mo.; Truman Culver, Boickow, Mo.; Jas. Adkins, Eldorado, Kans.; W. W. Garrett, East Lynn, Mo.; Joe E. Berry, Spickard, Mo.; C. D. Thompson, Rolyat, Mo.; El-ling Bros., Battle Creek, Iowa; N. R. Tracey, Trenton, Mo.; Jno. Barron & Son, Fayette, Mo.; A. Berry, Waterville, Kans.; M. T. Williams, Caldwell, Kans.; Sim Bros., Hopkins, Mo.; C. F. Johnson, Oskaloosa, Kans.; C. H. Gardner, Blandinsville, Ill.; C. G. Beal, Corydon, Iowa; Jno. Moore, Peculiar, Mo.; J. A. Wilson, Michigan, Kans.; W. D. Inverarity, Oskaloosa, Kans.; E. L. Koen, La Mar, Col.; J. E. Adams, Quincy, Ill.; R. B. Hume, Armstrong, Mo.; J. E. Berry, Spickardville, Ill.; Carpenter Bros., Burlington, Kans.

The Tudor Shorthorn Sale.

The first annual public sale from the Hill Brook herd of Shorthorns, owned by H. O. Tudor, Holton, Kans., was held at the barn on his farm 4 miles east of Holton, Tuesday, March 19, one of the stormiest winter days of the season. A heavy rain the evening previous was followed by a blinding snow-storm, yet Mr. Tudor pluckily went ahead with the sale and sold the shivering and courageous few present 3 bulls and 35 females, for which he realized \$4,305, an average of \$132.00. Owing to the storm delaying trains, several buyers failed to reach Holton in time for the sale, and many local buyers would not venture out. However, Mr. Tudor accepted the adverse situation and will try it again another year as he has 200 head of well-selected and well-bred cattle on hand, and will have no trouble in making a very attractive offering. He has yet left on hand about 40 young bulls for private sale this spring.

Colonels Woods, Sparks and Harriman did the auctioneer work, with the following results in detail:

- Redbud of Bill Brook, Albert Schultz, Holton, Kans., \$180.
- Red Bud of '92, C. P. Humphrey, Larkin, Kans., \$160.
- Lady Airdie 2d of Bill Brook, Henry Stunkel, Peck, Kans., \$110.
- Miss Franklin 3d, Henry Stunkel, \$175.
- Red Bud 3d, R. W. Pontius, Larned, Kans., \$165.
- Nelly of Bill Brook 2d, H. N. Farrow, Axtell, Kans., \$175.
- Red Bud of Bill Brook 3d, Henry Stunkel, \$170.
- Mayetta 2d of '98, R. W. Pontius, \$145.
- Katy Darling 5th, Henry Stunkel, \$125.
- Miss Josephine 3d of '94, D. L. Dawdy, Arrington, Kans., \$125.
- Bell Fairview 5th, F. Knopl, Holton, Kans., \$110.
- Lady Fairview 3d, J. A. Watkins, Whiting, Kans., \$100.
- Miss Patton, Henry Stunkel, \$130.
- Nancy Patton, Henry Stunkel, \$105.
- Red Bud of Bill Brook 4th, Henry Stunkel, \$125.
- Dolly Major, Henry Stunkel, \$110.
- Nancy Patton 2d, J. J. Fairchild, Centropolis, Kans., \$80.
- Miss Josephine 4th of '99, Sam Sawyer, Winchester, Kans., \$100.
- Miss Josephine 3d of '99, J. A. Watkins, \$85.
- Miss Josephine of 1900, W. P. Lair, Horton, Kans., \$100.
- Red Mary T. J. J. Fairchild, \$105.
- Baroness of Bill Brook 4th, J. A. Watkins, \$100.
- Belle Fairview 3d of '99, Sam Sawyer, \$95.
- Carry Nation, J. A. Watkins, \$105.
- Fair Lady, E. E. White, Sabetha, Kans., \$90.
- Lady Fairview 4th, J. J. Fairchild, \$5.
- Baroness of Bill Brook 3d, Bill Zable, Holton, Kans., \$70.
- Miss Harvey, R. W. Pontius, \$160.
- Young Cherry, Geo. Channon, Hope, Kans., \$100.
- Kate Barrington, Geo. Channon, \$85.
- Dolly Barrington, Henry Stunkel, \$85.
- Young Beauty, Geo. Channon, \$105.
- Jessie Claxton, Geo. Channon, \$85.
- Mary Hanks, W. P. Lair, \$85.
- Bull, Col. Parker, Sam Sawyer, \$130.
- Bull, Darling John 2d, A. Griffith, Banker, Kans., \$75.
- Bull, 3d Duke of Bill Brook, Jno. Davis, Holton, Kans., \$85.

The Donahay Shorthorn Sale.

Held at Mr. Donahay's farm near Newton, Iowa, Friday, March 22, 1901, resulted as follows: The top price on cows was \$1,530, paid by A. Alexander, Morning Sun, Iowa, for Emma 17th, a Duchess cow, bred by J. N. Potts & Son, Jacksonville, Ill., got by Victor of Homewood 110599, and out of Emma 10th. Ammande, by Royal Victor, sold to N. A. Lind, Rolfe, Iowa, for \$700; Broaddale Blossom 2d, sold to Brown & Randolph, Indianola, Iowa, for \$650; Violet 13th sold to C. S. Borday & Son, West Liberty, Iowa, for \$675; Nonpareil Maid sold

Cures Rheumatism

A New and Simple Remedy That You May Try Without Spending a Cent—Cured many cases of 30 and 40 Years' Standing.

TRIAL PACKAGE FREE TO ALL.



82 Years Old, Cured of Rheumatism After Suffering 42 Years.

If any reader suffering from rheumatism will write to me I will send them free of cost, a trial package of a simple and harmless remedy which cured me and thousands of others, among them cases of over forty years' standing. This is a grand remedy, and want every afflicted reader to learn by actual test what marvelous power it has, and therefore will gladly send a sample free, even though thousands of invalids should apply. Distressing cases of rheumatism, among them bed-ridden and crippled persons, were completely cured, of which I mention a few: A lady in Denham, Ind., writes that this remedy cured her, and she then cured fifteen of her neighbors. In Lyon, Mo., it cured an old gentleman at the age of 82, who had been a sufferer for forty years. In Seguin, Tex., it cured a case of forty-one years' standing. Hon. Jacob Sexauer, of Fountain City, Wis., was cured after suffering for thirty-three years and after having employed seven physicians. Mr. Jas. C. Atchinson, Justice of the Peace of Cape Island, N. S., states that this remedy cured his son who was to be taken to the hospital for an operation. Thousands of similar instances could be mentioned showing that here is a remedy that can be relied upon. Write at once for a trial package, for it is an honest remedy which you can test without costing one penny. Address JOHN A. SMITH, 184 Germania Bldg., Milwaukee, Wis.

to J. A. Crawford & Son, Newton, Iowa, for \$640, who also secured Lavender Duchess 4th at \$505. Red Rachel, by Bonnie Lad, also sold for \$505 to C. C. & E. S. Turner, Colfax, Iowa. The top price paid for bulls was \$450, the price paid for Royal Prince 4th 183019. He went to W. M. Lambing & Son, West Liberty, Iowa.

SUMMARY.
48 cows sold for \$11,781; average, \$245.52
14 bulls sold for 1,685; average, 121.36
62 animals sold for 13,470; average, 217.26

Poland-Chinas at the National Show.

The managing committee representing Poland-Chinas, consisting of H. M. Kirkpatrick, Wolcott, Kans.; R. D. Burnham, Champaign, Ill.; and F. D. Winn, Kansas City, Mo., announces that the following special prizes, in addition to the regular state fair prize list, will be offered for Poland-Chinas at the National Swine-Breeders' Show, to be held at Kansas City, October 7, 8, 9, 10, and 11, 1901:
1. Boar and not less than four of his get, any age or sex.
2. Sow and not less than four of her pigs, under six months.
3. Sow and one of her produce, any age or sex.
4. Boar and sow, any age.
5. Two swine, any age or sex, produce of same sow.
6. Boar and sow, six months and under a year.
7. Boar and sow under six months.
8. Two boars, any age.
9. Two boars under six months.
10. Two sows, any age.
11. Two sows, six months and under a year.
12. Two sows, under six months.
13. Four pigs, under six months, get of same boar.
14. Six pigs, any sex, under six months.
15. Ten hogs, any age or sex.
16. To the feeder of the best fitted exhibit.

The following form for offers of special prizes is suggested:
I hereby agree to give dollars, to be applied on special prizes offered to Poland-Chinas at the National Swine-Breeders' Show, to be held at Kansas City, October 7, 8, 9, 10, and 11, 1901, said special prize list to be that authorized by the three members of the managing committee representing Poland-Chinas and enclosed herewith. And I further agree to pay said amount on or before August 1, 1901, to Frank D. Winn, 1500 Grand Ave., Kansas City, Mo., secretary of said show. For information concerning all entries, apply to Frank D. Winn, 1500 Grand Ave., Kansas City, Mo., secretary of said show.

Cure for Tobacco Habit.

Mrs. J. Kay, 1034 High St., Des Moines, Iowa, has discovered a harmless and inexpensive remedy for the tobacco habit, by which her husband and hundreds of friends have been cured. Any druggist can put it up. Prescriptions and directions free for stamp to pay postage.

ZENOLEUM kills lice, ticks, mites, fleas, etc. on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Adviser" free. Zenker Disinfectant Co., Box 61, Detroit, Mich.

Stock Gossip.

Watson, Wood Bros. & Kelley Co., Lincoln, Neb., importers of Percheron and English Shire horses, had an importation of 20 English Shire stallions arrive at New York last week, and will be shipped at once by fast express to their barns at Lincoln, Neb.

The Kansas Farmer has received a copy of "Zenoleum Veterinary Advisor," a very interesting booklet, full of valuable information regarding ailments of live stock and official experiments with zenoleum. It is a handy little reference book for stockmen and will be sent free to those addressing Zenner Disinfectant Co., Box 61, Detroit, Mich.

J. W. Wampler, Brazilton, Crawford County, Kansas, has secured one of the largest whiteface breeding establishments in Kansas, of very well-selected and chiecy bred cattle. During the last fourteen months in addition to other purchases, he has bought from C. A. Standard's Sunny Slope farm, 36 head of registered Herefords.

J. F. True & Son, Newman, Kans., report a very lively trade in young Shorthorn bulls during the past few days, having sold to Wales Bros., Salida, Col., a bunch of ten choice, blocky bulls from 10 to 15 months old, sired by Golden Victor Jr. and Waterloo Duke of Hazelhurst 4th, also one bull to T. B. Holtzman, Concordia, Kans., by Waterloo Duke, and seven head to A. M. Parish, Lamar, Col.

Intending purchasers of Shorthorn cattle now have an opportunity of buying a cow or heifer bred to, or a bull sired by, Gallant Knight, the splendid sire at the head of T. K. Tomson & Sons' herd at Dover, Kans. The reputation of Kansas Shorthorns was well sustained at the national cattle show held at Kansas City last October, by Gallant Knight and some of his get, which were a part of that great show and secured in all about fourteen prizes in the various classes, for which they were entered.

A dispatch from El Paso, Tex., under date of March 19, says: "William Humphrey, of the Riverside Hereford Cattle Company, Ashland, Neb., returned here to-day from Fort Davis, Tex., where he closed a deal yesterday invoicing \$40,000. Mr. Humphrey bought 3,700 head of cattle from the McCutcheon Bros. for delivery in May and all their yearlings for 1902 and 1903. He also sold the McCutcheon Bros. 400 thoroughbred Hereford bulls for immediate delivery. The Hereford sale amounted to over \$150,000."

C. S. Prim & Son, Atchison, Kans., recently bought of D. L. Lawdy & Co., Arlington, Kans., five heifers and the Cruickshank bull, Armour Bearer, which was sold at the national Shorthorn breeders combination sale at Kansas City, last October. This lot of well-selected Shorthorns is intended as a part of the foundation of a new herd in Atchison County, which is located near Glick's old Shannon Hill farm. D. L. Lawdy & Co. also sold a young bull calf by Minister 122129, to A. J. Rice, also one to W. J. Simpson, Effingham, Atchison County.

A recent issue of the "Industrialist," published at the Kansas State Agricultural College, contained the following: "The farm department has received the Poland-China sow, College Pet. This pig was donated by Hiram Smith, Colwich, Sedgewick County, and was selected by the stock expert of the Kansas Farmer, H. A. Heath. Mr. Smith's herd of Poland-Chinas is one of the best in individual merit and breeding in Kansas, and this sow was selected by Mr. Heath as his choice of the herd. She belongs to the famous World Beater and Tecumseh Lad strains and will make a splendid foundation for the herd of Poland-Chinas which the college now expects to establish."

Henry Avery, Son, the well-known breeders of "pure Percherons" of Wakefield, Kans., have sold their herd stallion, Favorite 22937 to Messrs. C. S. McNay, G. W. Albin and Newton Sawyer, of Monument, Kans. These gentlemen, with true western Kansas grit, have had the courage to start on a good foundation, and the next step they contemplate is the purchasing of some good pure-bred mares. This makes the third stallion sold by this firm in Logan County this spring, which seems to bear out their contention that "the horses they sell and send out are their best advertisers." They still have some good young stallions for sale and can give a purchaser his choice in colors, and individuals to suit.

Last week's Kansas Farmer told a significant story about the Hereford stronghold in Marshall County, Kansas, but a reference to our report this week of the two days' Aberdeen-Angus combination sale at Kansas City last week and the purchase of 14 head by three breeders at this one sale, may make it necessary to make a modification in our next Marshall County story. E. A. Berry and Geo. Stevenson, of Waterville, Kans., were the heaviest purchasers at the sale of "doddies" and secured some of the best females sold. If this enterprising pace continues Marshall County will become the banner county in Kansas for improved stock.

Dunham, Fletcher & Coleman report the arrival at Oaklawn Farm, Wayne, Ill., February 1, of our first importation from France for 1901. This consisted of 35 Percheron stallions, all of choice breeding and great individual merit. A safe trip across the Atlantic and a thirty hours' run by express from New York in express palace stock cars landed them at Wayne without much fatigue, and now fully rested they are in prime condition for the coming breeding season. The firm also states: "Although we have a continuous brisk trade, showing a strong demand for breeding stallions of extra quality, yet our frequent large importations have so provided us that we are well supplied and our present stock on hand both in numbers and quality is positively unrivalled."

Col. R. L. Harriman, the live stock auctioneer of Bunceton, Mo., who made the auction of jacks and stallions for S. A. Spriggs, of Westphalia, Kans., on March 21, said to a Kansas Farmer representative: "We had a lovely day. A fair attendance but the hardest pull to get de-

cent prices I have had this season. The stock was in good shape and it was a very desirable lot of stallions and jacks, but owing to the lateness of the season for selling breeding stock of this kind, most everybody using this kind for service having already bought, we had to depend almost entirely upon speculators, and they, of course, wanted them as cheap as possible. I had to get down to 'my knitting' and turn on all the steam I had. The jacks sold from \$100 for colts to \$675, the top. The stallions sold from \$125 to \$300."

In a letter to T. F. B. Sotham, of the Weavergrace Breeding Establishment, Chillicothe, Mo., Mr. Edward B. Clark, Colconda, Ill., who purchased Improver's Hesiod 107727 at Mr. Sotham's sale in Kansas City last January for \$355, says: "Improver's Hesiod fills the bill completely. I think him the best bull in the land, and so does every one that sees him. I was offered \$700 for him." Mr. Sotham said at the time his young bulls were sold for much less money than their real value, and although as heretofore, the Weavergrace bulls outsold those of any other breeding establishment this season, it is quite evident that Mr. Sotham is right as is proved by this doubling in the value of Improver's Hesiod in Mr. Clark's hands. Improver's Hesiod is by Mr. Sotham's great stock and show bull, Imp. Improver and from a dam by Corrector out of Peerless 3d by Hesiod; "randdam by Pertly, a son of Horace. A line of blood than which there is no better, that insures a good report of him in Mr. Clark's herd."

K. B. Armour's well-known bull, Young Kansas Lad, has been sold to Powell Bros., of Channing, Tex. The purchase includes the cow Beatrice 3d and a bull calf by Southington, the imported bull at the head of Mr. Armour's herd. Young Kansas Lad was advertised for sale at the Armour-Funkhouser sale in Kansas City last December, but with the permission of the crowd was withdrawn. Mr. Powell takes him at \$1,000, the price for which he was held at that time. Beatrice 3d was sired by Oregon, whose daughters are counted among the best breeding cows now on the Meadow Park farm. The queen's heifer, Busybody, was credited with being the best imported cow sold by Mr. Armour at his December sale, and Beatrice 3d was acknowledged to be second best of those fitted for the sale. However, she was withdrawn from the sale before the catalogues were issued, upon the request of Mr. Powell. The two animals, with the bull calf, brought \$1,500 so it is reported. Mr. McNell, the herdsman, thought everything of these two animals and was sorry to see them go. He says there is a fine lot of calves by Aaron now coming on at the farm. He pronounces them the best crop of calves raised by any one bull that has ever been raised there.

Transfers of Pedigreed Stock.

HEREFORD CATTLE.

D. V. Turner, Fredonia, Kans., sold to Scharbauer & Aycock, Midland, Texas, the following Hereford cattle: Kodax 1d 83817 (bull), Frances 72771, Golden Belle 73871, Hortense 83812, Tess 2784, Queen Anne 72780, Carmen 76399, Nettie 2d 73896, Mary Washington 72854, Miss Pulaski 73893, Glory 72772, Caroline 78-96, Blossom 76309, Cleopatra 2d 76998, Haldee 76116, Minnie's Queen 68886, May Collins 116370.

GALLOWAY CATTLE.

From G. M. Kellam & Son, Richland, to C. B. Samson, Topeka, Galloway bull, Berkeley of Clover Hill 17394, and Belinda of Clover Hill 13693. Same to C. H. Samson, Topeka, Marcla of Clover Hill 14866.

BERKSHIRE SWINE.

By Marwaring Bros., Lawrence, Kans.: 1 boar, sired by Pearl's Prince 55256, to V. E. Ladwig, Severance, Kans.; 1 boar sired by 2d Seven Oaks Col. Mills 45718, to W. R. Stubblefield, Lawrence, Kans.; 1 boar sired by Pearl's Prince 55256, to M. J. Heady, Erie, Kans.; 1 boar sired by Pearl's Prince 55256, to Geo. Kassens, Anthony, Kans.; 1 gilt sired by Baron Duke 27 50013, to M. F. Kimball, Neodesha, Kans.

POLAND-CHINA SWINE.

H. Arndt, Templin, Kans.; Boar sired by King Lawrence 22521, to E. A. Perry, Volland, Kans.; boar, same sire, to J. S. Hooper, Alta Vista, Kans.; boar, same sire, to John Bond, Baman, Kans.; sow, same sire, to Christ. Huber, Pontias, Kans.; sow, same sire, to L. K. Brady, Manhattan, Kans.; boar, same sire, to Henry Gluck, Morehead, Kans.; boar, same sire, to H. J. Taylor, Wabaunsee, Kans.
W. S. Hanna, Richter, Kans.; Sow, sired by Pomona Style 24360, to H. Arndt, Templin, Kans.
H. Arndt, Templin, Kans.; Sow, King Lawrence 22521, F. S. Burrows, Alta Vista, Kans.; boar, same sire, to A. B. Hoffman, Eureka, Kans.; sow, same sire, to M. H. Velts, Alta Vista, Kans.

Lincoln Importing Horse Company.

Two advertisements for the above company appear in this issue of FARMER. The one was printed on the first forms that went to press before the new copy reached this office.

Mr. Sullivan, the manager of the company writes us as follows:

"Dear Sirs:—I wish to change our advertisement by using more space. This is due to the fact that we have received a number of inquiries believing them to come from our advertisement in your paper, and as we have decided to make some special rates we will exhibit same to your horse-breeders by inserting cut of our barn which is one of the grandest structures of the kind in all the West. Many of your Kansas friends have visited this place and in every instance have enthused over the grandness of the large, roomy stalls, hallway, etc., which are so well calculated for acclimating and building up newly imported stallions. This barn is now the home of grand, good, all-round Percheron and Shire stallions, and by the assistance of your paper I hope that your Kansas horse-

breeders will not overlook the fact that it would be to their interest to visit our barns before buying elsewhere. While we have made some sales in your state, however, for the quality of stallions we are handling the prices have not been in keeping with the high grade of individuality and richness of blood. Still that might be accounted for owing to the fact that no class of farmers or live stock breeders suffered more during the drought and the horse panic than the breeder raising the greatest lover of mankind—the horse—and as they now realize the fact that horses are in good demand with a rapid increase of value, it naturally enthruses them to return to their "first love" by commencing to breed and raise horses, and by so doing they propose to lay the foundation by securing a first-class stallion, and yet many of them are short of means, consequently they are obliged to figure very closely. This naturally works a hardship on the importer who handles a high grade of stock. These conditions have obliged us to sell many good individuals for less money, no doubt, than they could have been sold to breeders in the Eastern States. But as we came here sixteen years ago for this purpose we propose to stay and continue the business and will gladly do our share in placing some number one stallions in service in Nebraska, Kansas, and adjoining states. Up to date we have made sales in Dakota, Nebraska, and Kansas, and in every case we have placed a number one stallion at a moderate price, making us but small profit, hoping to receive some benefits in the future. We still have some excellent stallions in size, quality and breeding, both Percherons and Shires, which we expect to turn within the next thirty days, and have fully made up our minds to make a special price from now on."

Send at once for sample copies and terms to agents.



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

Palpitation,

fluttering or irregular pulsations are an indication of weakness of the nerves or muscles of the heart. A weakness long continued produces deformity and organic disease. If your heart action is weak, make it strong. Build up the muscles and strengthen the nerves with the greatest of all heart remedies, Dr. Miles' Heart Cure.

"My wife suffered greatly with palpitation of the heart, smothering spells and loss of sleep. She found immediate relief from Dr. Miles' Heart Cure and after a thorough course her trouble all disappeared."
CAPT. THOS. F. GEORGE, Athens, Ala.

Dr. Miles' Heart Cure

quiets the nervous heart, regulates its pulsations and builds up its strength as nothing else can. Sold by druggists on a guarantee.

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.



THE LINCOLN IMPORTING HORSE COMPANY

LINCOLN, NEBRASKA.

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

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

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

SEED CORN 215 Bush. per Acre.

DO you realize what that means? It is as large a crop as the average farmer grows on six acres. It is a big crop, an immense crop, an enormous crop, a prodigious crop. It was grown in 1896, by an enterprising Iowa Silver Mine Corn, the only variety in the world which will produce such a yield under ordinary conditions. It has won fully

---\$10,000.00 IN PRIZES---

At corn shows, state fairs, etc. It has yielded crops of 205, 196, 176 and 154 bushels per acre in the great state corn contests in Illinois; 211 bushels per acre in Indiana; 201 in Arkansas; 145 in Nebraska; 144 in Ohio; 137 in Texas, and immense crops everywhere. How does it do it? Simply that every stalk produces one or two large ears. No nubbins and no barren stalks. You can grow a big crop if you try.

WARNING Thousands of bushels of common white corn have been sold by unscrupulous dealers under the name of Iowa Silver Mine, and farmers have, of course, been disappointed with it. Don't run any risks this year but buy direct from headquarters. We named and introduced it. We have kept it bred up to a high standard. Our stock is unequalled in purity and productiveness. Each ear is carefully examined by two seed corn experts before shelling and it is thoroughly tested and of high vitality. It will cost you less than 20 cents per acre to use our seed and one bushel added to your crop pays the expense.

FREE Our Special Seed Corn Catalogue is full of valuable information about this and 20 other varieties of yellow, white and red corn. Instructions how to grow 200 bushels of corn per acre sent to each customer. Mention this paper when writing. Address,

Iowa Seed Co., Des Moines, Iowa.

The Home Circle.

A STORY OF QUITE A DIFFERENT KIND.

I had sworn to be a bachelor, she had sworn to be a maid. For we both agreed in doubting whether matrimony paid. Besides, I had my higher aims, for science filled my heart. And she said her young affections were all wound up in art. So we laughed at those wise men who say that friendship can not live 'twixt man and woman, unless each has something else to give. We would be friends, and friends as true as e'er were man and man. I'd be a second David and she Miss Jonathan. We'd like each other, that was all, and quite enough to say, So we just shook hands upon it in a business sort of way.

We shared our sorrows and our joys, together hoped and feared. With common purpose sought the goal which young ambition reared. We dreamed together of the days, the dream bright days to come. We were strictly confidential and called each other "chum." And many a day we wandered together o'er the hills— I seeking bugs and butterflies, and she the ruined mills. And rustic bridges and the like, which picture-makers prize. To run in with their waterfalls, and groves, and sunny skies. And many a quiet evening, in hours of full release. We floated down the river or loafed beneath the trees, And talked in long gradation from the poet to the weather. While the summer skies and my cigars burned slowly out together.

But through it all no whispered word or telltale look or sigh Told aught of warmer sentiment than friendly sympathy. We talked of love as coldly as we talked of nebulae. And thought no more of being one than we did of being three.

"Well, good-bye, old fellow." I took her hand, for the time had come to go. My going meant our parting, when to meet we did not know. I had lingered long and said farewell with a very heavy heart. For though we were but friends, you know, 'tis hard for friends to part; "Well, good-bye, old fellow, don't forget your friends across the sea. And some day when you've lots of time, just drop a line to me." The words came lightly, gayly, but a great sob just behind. Rose upward with a story of quite a different kind; And then she raised her eyes to mine, great liquid eyes of blue, Full to the brim and running o'er, like violets' cups with dew. One long, long look, and then I did what I never did before— Perhaps the tear meant friendship, but I think the kiss meant more.

The Siege of Calais.

Did you ever hear how brave Eustace de St. Pierre saved all the people of Calais from being put to death?

Well, it happened over five hundred years ago, and yet his deed was such a great one that it has not been forgotten even to this day.

Calais is a little walled city on the coast of France. It is now a sleepy old place, and the walls which surround it are used as a playground for happy children and a promenade for grown-up folks when the band plays.

But at the time we are talking of the walls of Calais were very real things and were ever so thick, 20 feet and more, and all the houses were inside these walls, and people could only go in and out of the town through gates which were shut at a certain hour every night and not opened again until the next morning.

Five hundred years ago this sort of thing was necessary, because the barons and great nobles were constantly at war with each other and would descend upon unprotected places and steal, or pillage, as it was then called, whatever they happened to wish for.

Calais was an important town because it was the seaport for England, and a great deal of the trade of France flowed through its strong walls.

The King of England at that time was Edward III. He had already won great victories in France, but he made up his mind that to complete his successes he must take Calais; so after winning his great battle at Crecy he turned his face toward this city and arrived before it with his army.

The Governor of Calais was a knight called John de Vienne. He had been warned that the English army was approaching, and so he lost no time in ordering all the country people round to come within the walls with their cattle and grain. Then he sent far and wide for all the provisions that could be gathered together, food for the people and fodder for the cattle, and stocked the city granaries full, so that he could stand a long siege, for he had no intention of giving Calais up to the English.

When everything had been brought in he ordered the gates closed and then

set to work to settle affairs inside the city. The soldiers in the fortress were kept busy drilling the citizens and teaching them how to handle arms. Men were set digging wells so that there might be no want of water. All the provisions were placed in the hands of the Governor, who had men serve them out daily in certain quantities, so much for each person, that the food might not be wasted, but be made to last until the trouble was over.

The arrangements were hardly completed before an English herald arrived under the walls and demanded that the keys of the town be surrendered to Edward of England.

John de Vienne promptly told the herald to go about his business, that the town of Calais belonged to the King of France and the keys would be given to no other monarch.

When Edward heard this message he was exceedingly angry, and, ordering his horse, started to ride around the walls so that he might discover the best spot to attack the saucy town and take it by force, since it would not surrender peaceably.

What he saw on this ride, however, made him somewhat anxious. Guns were not in use then, and the only way of taking a fortified town was by scaling the walls or breaking down the gates with a battering ram.

As the King rode along he saw that the walls of the city were so strong that he could not hope to break them down with his rams and so high that his scaling-ladders could not reach the top, so he returned to his tent in no pleasant mood.

After hours of thought he decided that the only way to take Calais was to starve the people into submission and at once gave orders for his soldiers to build themselves huts to protect themselves from the winter winds, for the siege would be a long one.

From the walls of Calais the Governor saw these preparations and understood well what they meant. But he was equal to the occasion.

He ordered all the women and children, the sick and the aged men to leave the city. They were useless mouths, he said, which he did not propose to feed.

So one morning the gates of Calais opened and a sad procession of women and walling children, feeble old men and sick people drawn in hand-carts issued forth. There was danger that the English might molest them as they tried to pass through their camp, but King Edward, who was a noble-minded man, no sooner saw them than he gave orders that the people were to be allowed to go safely on their way and sent them gifts of money to help them. Then the gates of Calais closed for good.

Eleven months passed, and still the English and French were facing each other with that strong wall between them.

Things were going badly in Calais. The provisions had given out and the people had for weeks been living on their horses. When the poor dogs had been killed and eaten, and it finally came down to eating cats and rats, the Governor thought it was time to think about surrendering.

He ordered his soldiers to signal to the English that he wanted to parley—that is, to speak to them. The King sent a knight called Sir Walter Manny, and the Governor told him he was ready to give up the city provided Edward of England would grant him a free pass for himself and all the brave men who had helped him to defend the town.

"That," said Sir Walter, "the King will never grant. He is so angry that a little town like Calais should have defied him, the conqueror of Crecy, for eleven months, that he is determined not one of the defenders shall leave the town alive."

"But think," said John de Vienne, "what we have already suffered." "And have we not suffered? Half the army has been sick with agues and pestilences from the morasses and marshes that lie around our camp. The King will not forgive!"

"But," argued John de Vienne, "we have only done for our King what yours would expect you to do for him."

This answer so impressed Sir Walter that he went to the King of England and pleaded for the lives of the men in Calais.

Edward was for a time too angry to listen to him, but at last he declared that if six of the first men in Calais would come to him bareheaded and barefooted with ropes round their necks like criminals, he would take his revenge on them and spare the lives of the rest of the citizens.

When this news was taken back to Calais the citizens begged the Govern-

or to refuse the dreadful terms. They said they would rather that all should die by the sword than that one of their number should be tortured and put to death by the English.

It seemed as if the men of Calais were doomed, when Eustace de St. Pierre came hurrying into the crowd. He had just heard of the terms offered, and pushing his way to the front asked the Governor to take him as one of the six.

There was a great hush on the assembly as he finished speaking. The Governor, tears running down his furrowed cheeks, grasped St. Pierre's hand; but for some minutes the two men stood alone. No one else dared to make the sacrifice.

The St. Pierre faced the crowd and told them what a little thing it was for a man to die, but what a great thing it was to save the lives of others, and how he grieved that his sacrifice alone was not sufficient to save his beloved city and fellow-citizens.

His words aroused the courage of his hearers, and soon five other devoted men were standing at his side ready to make the sacrifice.

Then the gates of Calais opened once more, and Eustace de St. Pierre and his five companions marched slowly toward the English camp. They were barefooted and bareheaded; ropes hung around their necks, and in their hands they bore the keys of the city gates.

Seated in his splendid tent the King received the men. His eyes glistened and his mustaches bristled with fury as he looked at them.

"Take the keys and lead them away to death!" he cried to the knights who stood near him.

At that moment there was a stir at the opening of the tent, a rustle of silken garments, and a woman rushed up to the King's throne and fell down before him.

It was his Queen Philippa. She had heard the King pronounce sentence and came to prevent his taking his terrible revenge on these poor men whose only fault was their devotion to their King and their country.

The King ordered Philippa to rise. It was not seemly that his Queen should be on her knees before his knights and his soldiers and the criminals from Calais. But the lady did not heed him.

In earnest words she implored him for the love of the Lord to pardon the men, and when he would not listen to her fell weeping at the King's feet, her long hair sweeping the ground, her arms clasped around his knees.

Edward of England loved his Queen dearly and the spectacle of her grief moved him as nothing else could have done. He raised her in his arms, and as she hung weeping on his bosom he said:

"I give the prisoners to the Queen! Take them to her tent and let her do with them as she will."

The joyful Philippa fed and clothed the men and sent them back to the city loaded with gifts.

The next day Edward took possession of Calais and not a man within its walls was harmed.—Harper's Bazar.

Coronation of Edward VII.

"The coronation of King Edward VII and Queen Alexandra will not take place until the middle of June, 1902," says the London Chronicle of February 23. "The ceremony will follow the precedent observed when William IV and Queen Adelaide were crowned, when much of the overelaborate ceremonial of the magnificent coronation of his predecessor was abolished as being not only too costly but as out of keeping with the spirit of the age. On that occasion the banquet in Westminster Hall cost £100,000 and the armor and other accoutrements of the champion an additional £2,000. King William reduced the pageant to its simplest and at the same time most dignified expression. It is calculated that it will take a full year to organize the forthcoming great function, which will be attended by an extraordinary number of crowned heads and other royal and eminent personages, both European and Asiatic.

"Meanwhile the Duke of Norfolk, to whom as Earl Marshal belongs by hereditary the arranging of the coronation, is already preparing his elaborate scheme. Owing, however, to the sale two generations back of the manorial rights of Worktop to the Dukes of Newcastle, the Duke of Norfolk has lost his time-honored privilege of finding the glove for the right hand of the sovereign, which at the coronation of Queen Victoria had emblazoned upon its back the arms of the House of Howard. These will now be replaced by those of Pelham Clinton.

"Owing to the enormous multitude

Found

The most thorough and effective house cleaner ever invented

GOLD DUST Washing Powder



which, it is anticipated, will assemble in London to witness the coronation, many schemes are already under consideration to lengthen the route of the procession without interfering with its dignity, by taking it out of the way, as if it were a circus. Under the Plantagenet and Tudor Kings it was the custom for the sovereign to pass the night before the ceremony at the Tower, and thus the coronation procession passed through the city to Westminster Abbey. Elizabeth was the last to follow this line, for when James I was crowned the plague was raging in the city, and all subsequent sovereigns have gone direct either from Whitehall, St. James' or Buckingham Palace to the Abbey. George IV passed the night before his coronation in the Speaker's House, at Westminster. It was Queen Victoria who first passed down the familiar route for her coronation, which she followed 50 years afterward at her first jubilee. It was, however, even then considered far too short, for, although the population was much less then than it is now, the crowd was tremendous."

Uncle Eben Moralizes.

"Don't pass too much o' yoh time whah dey sells gin," said Uncle Eben. "When a man gets to be a saloon fixture, he generally goes to smash in a hurry, wifout waitin' foh a lady to come roun' wif an ax."—Washington Star.

Suburbanite—You've got a new baby at your house, I hear?
Townite—Great Scott! can you hear it away out there in the suburbs?—Detroit Free Press.

FARMERS

Can make money the year around by selling Estey Organs at such times as they are not busy with their regular work. For full particulars write to THE ESTEY COMPANY, 916 Olive St., St. Louis, Mo.



Tied Up

When the muscles feel drawn and tied up and the flesh tender, that tension is

Soreness

and

Stiffness

from cold or o'er exercise. It lasts but a short time after

St. Jacobs Oil

is applied. The cure is prompt and sure.

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

The Young Folks.

DO THE CHILDREN PAY?

'Do children pay?' said old man Scruggs, a-leanin' on his hoe, "Jest wait 'til you've been married, say, some twenty years or so. You'll have more sense than to stand up there and throw your time away. By askin' sech fool questions. Pay! Great gosh! Of course they pay."

"We go home tuckered out at night, they'll climb upon our knees. And when we try to keep 'em down, they'll cry for one more squeeze. And raar and pitch about us all, until fust thing we know our joints are free from achin' and our hearts are in a glow."

"They pay us when their frank young love shines out in their jolly eyes; Even when our ears are deafened, there's a music in their cries. Sweeter than all the fiddles and planners ever made— Don't think it's so? Well, now, you wait, and 'member what I've said."

"The man whose children's hearts are his is the man who is truly blest; The sight at home of his boys and gals is more to him than rest. I swear! There wouldn't be half the fools in this weary world to-day If all men only could understand what big intrus' children pay." —Browne Ferriman.

Climbing Trinity Spire.

According to Cleveland Moffet, in the February St. Nicholas, Robert Merrill, alias "Steeple Bob," makes light of climbing to the top of Trinity spire.

Merrill laughed about the climb up old Trinity; the first climb when he carried up the hauling rope and worked his way clear to the cross, with nothing to help him but the hands and feet he was born with, and did it coolly, while men on the street below turned away sickened with fear for him.

"I'm telling you the truth," said Steeple Bob, "when I say it was an easy climb; any fairly active man could do it if he'd forget the height. I'm not talking about all steeples; some are hard and dangerous; but the one on Trinity, in spite of its three hundred odd feet, has knobs of stone for ornament all the way up (they call them corbels), and all you have to do is to step from one to another."

"How much of a step?"

"Oh, when I stood on one the next one came to my breast, and then I could just touch the one above that."

He called this easy climbing!

"The only ticklish bit was just at the top, where two great stones, weighing about a ton apiece, swell out like an apple on a stick, and I had to crawl around and over that apple, which was four feet or so across. If it hadn't been for grooves and scroll work in the stone I couldn't have done it, and even as it was I had two or three minutes of hard wriggling after I kicked off with my feet and began pulling myself up."

"You mean you hung by your hands from this big ball of stone?"

"I hung mostly by my fingers; the scrolls weren't deep enough for my hands to go in."

"And you drew yourself slowly up and around and over that ball?"

"Certainly; that was the only way."

"And it was at the very top?"

"Yes, just under the cross. It wasn't much, though; you could do it yourself."

I really think Mr. Merrill believed this. He honestly saw no particular danger in that climb, nor could I discover that he ever saw any particular danger in anything he had done. He always made the point that if he had really thought the thing dangerous he wouldn't have done it. And I conclude from this that being a steeple climber depends quite as much upon how a man thinks as upon what he can do.

"A funny thing happened," he added. "After I got over this hard place I slid into a V-shaped space between the bulging stone and the steeple shaft, and I lay there on my back for a minute or so, resting. But when I started to raise myself I found my weight had worked me down in the crotch and jammed me fast, and it was quite a bit of time before I could get free."

"How much time? A minute?"

"Yes, five minutes; and it seemed a good deal longer."

Five minutes struggling in a sort of stone trap; five minutes stretched out helpless at the very top of a steeple, where one false move would mean destruction—that is what Merrill spoke of as a funny thing! Thanks, I thought, I will take my fun some other way, and lower down.

"You would be surprised," he went on "to feel the movement of a steeple. It trembles all the time, and answers every jar on the street below. I guess old Trinity's steeple sways eighteen inches every time an elevated train passes. And St. Paul's is even worse."

Why, she rocks like a beautifully balanced cradle; it would make some people seasick. Perhaps you don't know it, but the better a steeple is built the more she sways. You want to look out for the ones that stand rigid; there's something wrong with them; most likely they're out of plumb."

College Men Who Cook.

One of the features of the recent prom. week of the Yale juniors at New Haven was the entertainment of guests in the rooms of the students who occupy gorgeous suites in the handsome dormitory buildings throughout the town. Not only were there bountifully spread tea tables for the 5 o'clock entertainment of the fair guests, but many of the more progressive students provided elaborate luncheons, suppers and even dinners which had the charm of novelty for the young women and their chaperons from out of town.

Many of these feasts were provided by caterers and were accompanied by flowers and orchestras in regulation fashion, but by far the jolliest were the impromptu spreads where magic dishes were concocted in chafing dishes over which the hosts presided with the air of confidence that comes only of successful experience. In fact, chafing dish cookery has become a fad with the college boys of Yale, of Princeton, and of Cornell, and there are rumors that many of the more accomplished of these amateur chefs have taken courses in the culinary art from private instructors.

Many of the boys possess not only one chafing dish, but a series in different sizes, utilizing one specially for fish, one for the cooking of birds, and others for vegetables, and these dishes combined with the salad bowls and the tea services give a thoroughly domestic look to the rooms of some of the students. In the making of tea there is a high standard of excellence maintained, although the pouring of it is always given into the hands of some kindly chaperon.

There is considerable rivalry among these amateur cooks as to the results which they put forth, and for this reason some of the feasts were marvelous in the variety and extent of the viands served as well as the cleverness with which they were prepared above the flaming lamps. The laurel was awarded to the man who actually succeeded in serving a spring dinner in a chafing dish, or rather in the series of chafing dishes which he boasts, all of silver, bright and shining, the largest being big enough to accommodate a good-sized steak, and the smallest being a pigmy dish no larger in circumference than a saucer.

The spring dinner began with little neck clams, infant bivalves, below the legal size for service, but nevertheless appetizing. These were served very cold on blue china plates. A bisque of asparagus followed. It had been sent all the way from New York and was heated in a deep dish and served in dainty little bowls, each upon a plate to match, an innovation that proved a success. As one girl remarked, there seemed no reason why consomme should be the only soup that is not served in the ugly overgrown saucers which are called soup plates.

Shad roes, saute in the chafer followed with hot-house cucumbers. Stuffed olives, crisp celery and almonds were passed about in quaint silver baskets, together with thinly-sliced brown bread, buttered and cut in star sandwiches.

In the meantime the triumphant host was essaying a no less important dish than spring lamb and green peas. In one dish the daintiest of chops were being saute with a gill of wine as a sauce, while in another fresh southern peas were cooking. The peas were served with cream, butter, salt and pepper, and Bermuda potatoes, fried crisp in the cork-screw spiral style known as a la Sarah accompanied the chops.

After this a dish of Neapolitan spaghetti was prepared and was the success of the evening. This is the dish upon which this particular host prides himself, and as spaghetti in a chafing dish is something of a novelty, the method of preparing it is of interest.

The spaghetti was cooked soft and rinsed in cold water and strained dry. The sauce was made by melting an ounce and a half of butter in the cutlet dish and adding half of a small bottle of French tomato conserve with pepper and salt and three spoonfuls of beef extract. This was cooked over the hot water dish for about ten minutes and the spaghetti was added gradually. Freshly grated Parmesan cheese was added and the dish was served.

Salad of fresh tomatoes, lettuce and green peppers was followed by cheese, after which beautiful southern straw-

berries of mammoth size were served, the hulls being left on and powdered sugar passed with them. Small cakes and an excellent French coffee made in one of the regulation pots of copper and glass concluded the very novel and delightful dinner which was served with one wine throughout, a sweet champagne. The dinner was planned solely with a view to pleasing the tastes of the feminine guests, as this particular cook is famous for more substantial menus than this at his merely masculine spreads.—New York Sun.

Mummies in Ancient Peru.

Three Peruvian Indian mummies have just been received at the Smithsonian Institution and are looked upon with some awe, as they are certainly 370 years old, if not much older, dating from the time of the Spanish invasion, or previous. The Society of Anthropology was treated to a seance at the opening of one of these prizes a night or two ago, and it proved a veritable morgue, containing the body of a woman and two babies, probably a mother and children. The bodies were imbedded in a padding of leaves and this in turn bound about with a piece of goods not unlike gunny sack, held in place by a rope being wound about it.

When the package was opened the bodies were found to be doubled, with knees almost under the chin, and while small particles only of flesh and skin were found the long black hair of the woman was found adhering to the skull and shorter hair to the heads of the infants. The bodies were evidently those of Indians of the middle or lower class, as no wooden mask, such as is placed over the dead faces of those of more exalted rank, was found. The three bodies in one bundle would also lead to this belief, as the wealthier people would not disinter their dead and put others in the package.

These are indeed prize packages to scientists, as each one is sure to contain treasures in accord with the rank and wealth of the corpse. In this one was found an exquisite vase, having on one side a bird in raised design and a well-modeled handle on the other, as fine a specimen of pottery as is to be found in the institution. Besides this there was a quaint work basket quite as well kept as though laid away yesterday instead of 300 or 400 years ago. It was woven daintily and built with two compartments, an upper and lower one and containing two spindles. One was large with coarse flax wound about it, while the other was delicately made and wound with finer thread. A bean pod peculiar to a tree of Peru rattled about in the basket, and all about in the leaves were bits of white cotton having in it the seed.—Washington Times.

A Household Word.

"Your name is a household word, Senator." This was the remark made in Chicago to Hon. Jonathan P. Dolliver, the new United States Senator from Iowa, during the recent Presidential campaign, when a Republican committeeman, anxious to secure him for a speech, assured him that no man was better known or understood in the city by the lake than the gentleman from Iowa. "Why, sir, no man is better loved by our people or more highly regarded than you," said the committeeman, rising in enthusiasm.

"If that is the case," replied the Senator, "I shall have to grant your request and speak again in Chicago."

"I shall have to advertise you," suggested the committeeman. "Of course, I know your name—but, to be sure, I want to ask you. I suppose Joseph T. Dolliver is right?"

"And my name is a household word in Chicago!" responded the Senator.

"Yes sir!"

"And my Christian name is Joseph?"

"My mistake, Senator. I might have known better. It's John A. Dolliver."

"What!" exclaimed the Senator, "and my name is a household word in Chicago!"

"Oh, well," spoke up the committeeman blandly, "it's my mistake again. What is your Christian name, anyhow, Senator?"

"It's Jonathan, sir, and my name is a household word in Chicago!"

"My mistake, entirely," apologized the committeeman. "You know I am forgetful at times. I believe you spell your name D-o-l-l-i-v-e-r?"

"Hold on! hold on!" shouted the Senator. "And my name is a household word in Chicago! Well! well! who'd 'a' thought it! I spell my name D-o-l-l-i-v-e-r."

"Of course, of course," soothingly chimed the committeeman. "Of course, nobody knew that better than myself. You are ex-Senator, I believe?" It was then that Senator Dolliver

ONE DOSE OF

PRICKLY ASH BITTERS

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

wilted, and whispered sadly: "And my name is a household word in Chicago!" Saturday Evening Post.

An Inscrutable Providence.

TODD BLYTHE.

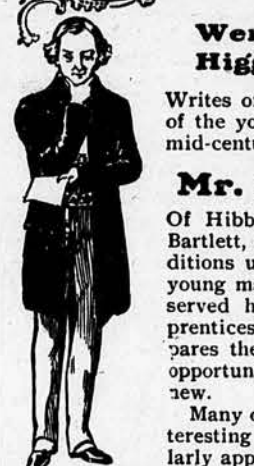
"It's mah concloooshun, deacon, somehow yo' done fo'git, Dat yo' am a p'sumptuous man an' lack de sense an' wit T' compahind what Provahdence done mean by all huh ways; When I been puzzlin' mah own se'f fo' yeahs an' yeahs an' days! Wif all de larnin' I done has, dey's times—I free c'nfess— I has t' drap the subjek' an' jus' give mah haid a res'. So, if a o'dained preachah he kaint allus clar de way, Den, what's a no-count deacon, wif no larnin' got t' say? Fo' fo'ty yeahs Ise toted dis yer bible in mah han', A-preachin' t' yo' niggahs, so dat yo' kin unastan', An' heah yo' come, a-astin' me—jus' lak I nevah failed— 'When yo' goes chicken-huntin', why de hen coop door am nalled? An' yo' kin smell, at Johnson's, hen-meat cookin' ev'y day!'— Ain' dat what I bin sayin'?—ain' dat Provahdence's way? An' I kaint tell jus' why, no mo'—yo' listenin' to mah speakin'?— Dan why I am a pahson an' yo' a o'd'ny deacon!"

—The Man With the Hoe.

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AN IMPORTANT CHANGE.

The most important newspaper change that has taken place in Kansas in recent years is the purchase of the Topeka Daily Capital by a company composed entirely of practical newspaper men. This company consists of Arthur Capper, president; Harold T. Chase, vice-president; W. B. Robey, secretary, and R. L. Thomas, treasurer. Mr. Capper was for years a reporter and later a political writer on the Capital. He afterwards bought the Topeka Mail, with which he consolidated the Breeze, taking over T. A. McNeal, editor and proprietor of the Breeze, who has won deserved fame as the brilliant editor of the Mail and Breeze. The consolidated paper has been a most pronounced success in every way. Mr. Chase began work on the Capital several years ago as a reporter. He soon displayed signal ability as a writer and was promoted to the position of editorial writer. In all the changes of recent years every management of the Capital has retained Mr. Chase in the editorial chair, and he now becomes editor-in-chief. Mr. Robey began work on the Capital force some twelve years ago as a traveling solicitor. He has been through every grade of the business end of the work. Since the beginning of the present year he has been the efficient circulation manager of the KANSAS FARMER. It is with much regret that the FARMER gives up his valuable services. Mr. Thomas has been connected with the business office of the Capital for several years. He is a capable financier, and has by thrift and frugality accumulated capital enough to buy several times his present interest in the new company. These are all hard-working men, in the prime of manhood; they are men of good habits, good abilities, and great industry. They will be subject to no dictation outside of the Capital office, and will make a paper of which the state may well be proud.

COUNTRY OR TOWN.

One of the anxieties of patriots and philanthropists has been caused by the tendency of population to concentrate in cities and towns. This tendency manifested remarkable strength during the later decades of the last century. The seething dens of corruption into which the large cities seem to be developing with no apparent power to control or eliminate, contrast strongly with the honesty of practice and the purity of purposes which prevail in the country. While great wealth, towering intellects and sodden degradation alike gravitate to the centers of population, the majority seems always to be of the latter element and to control the great municipalities. These great municipalities are becoming so great that their influence is preponderant in many cases in at least two of the greatest states of the Union. These states often determine the course of the nation on issues involving the welfare of the entire country. The ruthless hold maintained by representatives of vicious classes in the cities becomes firmer as each new hundred thousand is added to the concentrating population. If the country were growing as fast as the cities, there might be no cause for uneasiness. As the fact is, it may be that the anxiety of the philanthropist to discover some sign of a turning of the tide from town

to country is not altogether unreasonable.

It is a matter of history that after the discovery of potatoes in America, it was very difficult to induce the moderately or even poorly fed common people of Europe to eat them. Not until they had been eaten at a banquet by the nobility, could the peasantry of France be convinced that they were fit to eat. Human nature is much the same now as then. The great financier moves to town; the great writer goes to town; the great statesman spends much of his time in town; the great preacher is paid to entertain a city congregation; the great teacher is taken to the great school on good pay in a big city; the great inventor finds appliances at hand and financial backing awaiting him in the city; the great merchant finds a suitable field only at a populous center; great and little manufacturing concerns congregate at the city, because there, only, can they secure unfailing supplies of human labor. With all these and many more rushing into the towns what wonder that the lower and the lowest orders of men and women go with the tide? When, if ever, this tide of the strong shall flow out instead of in then may the "raskall many" cease to crowd with vicious enthusiasm into breeding places of wickedness, the pestilential emanations from which threaten the fortunes, the children, and the very lives of the rich, the strong and the good.

It may be one of the weaknesses of American development that so much has been done to make the towns grow. It has been considered good statesmanship. It surely gets votes. Often has the enthusiasm to make the town grow been so propagated in the country as to retard the development which should have made the surrounding farms more profitable and the farm homes more attractive.

There has always been a recognition of the value of the strong rural manhood. This recognition has called country-bred men to most places of prime responsibility in government, in business, and in the purely intellectual callings. This may be called the popular recognition of the worthiness of the country man. There is also discernible throughout our history a recognition on the part of our brightest intellects of the value of country breeding. So also there has been a recognition of the fact that to maintain the rural supply of virtue and vigor, it is necessary that the resident of the country as well as the city nabob shall prosper. To this end, our agricultural colleges were established and to this end they are maintained. No wiser statesmanship has been crystallized into law than that which provided for these colleges.

Among those of prominence who have tried to promote prosperity on the farm by encouraging improvements in stock or in methods, the Milwaukee Evening Wisconsin mentions the following:

Robert R. Livingston, the celebrated chancellor of the state of New York, who administered to George Washington the oath of office as President of the United States, was instrumental in laying the foundations of the American woolen industry by introducing Merino sheep into the United States. After his retirement from the public service he devoted much of his time to agriculture, on his estate at Clermont on the Hudson. It was while he was United States minister to France that he sent home two pairs of Merino sheep. This was in 1802. Later he added to the flock resulting from this stock, and for years devoted himself to demonstrating that sheep husbandry could be made profitable in this country if farmers would acquire blooded stock and aim to produce wool of high grade. "I knew the importance of the object," he afterward wrote, "and I resolved to leave no means untried to convince my fellow citizens of it." It was from Chancellor Livingston that Elkanah Watson purchased the Merinos with which he set an example for the farmers of Berkshire County, Massachusetts. His breeding flock was kept up until Berkshire County was changed from a coarse-wool district to a fine-wool district, and her hills were covered with valuable flocks and the population became so completely absorbed in wool-growing and manufacturing that other branches of industry were practically abandoned.

The Father of his County was himself an example of the progressive influence that may be exerted by a rich man engaged in agriculture. Of his estate in Virginia which exceeded 8,000 acres, upward of 3,200 acres were under cultivation during the later part of its owner's life. When Washington became a farmer the system of agriculture in vogue in Virginia was crude and wasteful. He has left a description of it in these words:

A piece of land is cut down and kept in constant cultivation, first in tobacco, and then in Indian corn (two very exhausting plants), until it will yield scarcely anything; a second piece is cleared, and treated in the same manner; then a third, and so on, until there is probably little more to clear. When this happens, the owner finds himself reduced to the choice of one of three things—either to recover the land which he has ruined, to accomplish which he has perhaps neither the skill, the industry nor the means; or to retire beyond the mountains; or to substitute quantity for quality, in order to raise something. The latter has been generally adopted, and with the assistance of horses, he scratches over much ground and seeds it to very little purpose.

Washington had the means as well as the will to study the problem and set an example to reform. He read works on agriculture and tested their theories which seemed to promise good results. He became an early convert to the rotation of crops, and diversified the products of his estate, raising large quantities of flax, hay, clover, buckwheat, turnips, and potatoes, in addition to wheat, corn, and tobacco. He showed his neighbors, by example, the large opportunities of profit in grass-lands. He introduced the use of fertilizers on a large scale, and, when describing the qualities he desired in an overseer, said the man must be, "above all, Midas-like, one who can convert everything he touches into manure as the first transmutation towards gold." He carefully tested different varieties of tobacco and wheat, to determine which yielded the best returns when planted, and he bred from selected horses, cattle, and sheep. "I shall begrudge no reasonable expense," he wrote, "that will contribute to the improvement and neatness of my farms; for nothing pleases me better than to see them in good order, and everything trim, handsome, and thriving about them." Washington, the farmer, exerted in the sphere of agriculture an influence as useful in its degree as that which in another sphere proceeded from Washington, the statesman.

In a letter to the Chicago Record, William Elroy Curtis calls attention to the wholesome influence of the operations of a contemporary rich man who is engaged in farming in the neighborhood of Asheville, North Carolina.

The example of George Vanderbilt's system of farming at Biltmore is beginning to be felt throughout all this part of the state. At first people regarded his enormous expenditures and the magnificent results with curiosity and wonder; further observation suggested that his methods were easy of imitation, and thus Mr. Vanderbilt's highest ambition is being realized, and the object lesson he intended to place before the eyes of the people of North Carolina is being rapidly learned.

The present seems to be one of the recurring periods when the desirability of farm life as well as its usefulness to the state receives much recognition. Some thinkers also hold that we have reached the permanent turning of the tide, and that the time has now come when prosperity in the country shall be more general. Further, it is held that the impetus towards the cities is becoming less pronounced, and that refinement and wealth are hereafter to make their headquarters apart from the dust and stench, the corruption and vice which are so close neighbors to the resident of the town.

Air Holes in the Soil.

H. R. HILTON.

There are times when fields of fine texture soils seem to be honeycombed with worm holes. Some of these perforations are large enough to admit a slate pencil. Their position is invariably vertical. These vertical perforations have been credited to worms and various other agencies, and have been mistaken by some for "pores" in the soil, about which lecturers and writers have had much to say in recent years.

While trying to determine the resistance of the air in the soil to the downward movement of rain-water, the writer accidentally made several of these pores or worm holes. They can be readily made to order by any one.

EXPERIMENT IN MAKING THE AIR HOLES.

A deep glass vessel like a lemonade glass will serve the purpose. Fill within two inches of the top with any fine textured soil, getting the coarsest part at the bottom and the best pulverized at the top. The top layer should be fine enough to puddle readily. Apply enough water to cover the soil an inch deep and before this disappears in the soil, add another half inch and still another if necessary. See to it that there

is always a little water on the top of the soil, till the whole mass is moistened to the bottom. If there is 5 inches of soil in depth, more than half of the space it occupies will be filled with air. When the water covers the surface the air is shut in. The water descends, filling all the space between the soil particles. The confined air is being forced into a smaller space, and when 2 inches of the soil has been saturated, the pressure has become so great the air has power to force for itself an outlet. It breaks through at the weakest place in the mud blanket and sends up a little spray of the finest soil particles, giving in miniature, a good illustration of a volcano in action.

THE AIR CHIMNEY.

The place where the air first breaks through becomes the air chimney. The fully saturated soil—at this stage resembling soft mud—would soon fill it up. But the air released lessens the resistance to the downward movement of the water. It descends for a second or two more rapidly, compressing more air, which is in turn forced out. The mud chimney is now the point of least resistance and every time a puff of air is forced out the chimney is lengthened and strengthened.

The tiny air-holes or safety valves formed by the alternate movement of the water downward under pressure, and the forced movement of the air upward are but the evidences of the hydraulic compensator that has been at work and of the avenues through which the entrapped air escaped.

AMOUNT OF WATER IMPORTANT.

In making this experiment the right amount of water is important. Too much or too little may result in failure, but a number of trials will enable the operator to determine the right quantity to use. The glass should be held between the observer and a bright light and the eye fixed on the clear water on top of the soil.

The intermittent explosions of air carrying the soil with it to form a volcanic top cloud in the water presents some interesting phenomena connected with the dynamics of the soil, in a most fascinating miniature moving picture.

CONDITIONS FAVORABLE.

The conditions are most favorable for the formation of these air-holes in the field, when a comparatively dry, fine textured soil has been recently plowed and not yet packed by rain water, and a heavy shower of sufficient duration to fully saturate the soil several inches deep has fallen upon it, and the movement of the water through the puddled surface is too slow to remove the falling rain as fast as it falls, and the subsoil is compact in formation. Such a field will be found full of pencil holes, the day after such a shower.

DEPRESSIONS.

The pox marks in the fields or the little puddled depressions that cover the surface are the result of larger explosions of entrapped air in a freshly and deeply plowed field after a very heavy shower.

It is not claimed that worms do not also bore holes in the soil, but their work is more in spots and not so uniform, and undoubtedly many of them escape from the fully saturated soil through these air vents in search of air at the surface.

VALUE OF THE EXPERIMENT.

This experiment is valuable in that it emphasizes the resistance soil air offers to the descending rain-water, after the top inch or two has become fully saturated and puddled, and especially when the soil is dry. It also gives an inkling as to why the rain packs the soil more closely together when it falls on a loose soil than it does when it falls on a similar soil that has first been compacted with disc or tooth harrow after plowing.

WHEN RESISTANCE IS SLIGHT.

When there is sufficient moisture in the soil to form a continuous film of water over the surfaces of the soil grains, the resistance of the air to the descending water is slight as compared with a dry soil, because surface tension can draw the water down and away from the surface by simply thickening the film. The water is continuously slipping past the air and thus relieving the water pressure at the surface.

The water moves through dry soil as the first rain-drop on the dry window-pane that trickles slowly with a bead at the end—and through the moist soil as the second rain-drop that finds the moist track of the first and passes swiftly down to the same terminal.

A LARGE PERCENTAGE OF MOISTURE RETAINED IN MOIST SOIL.

The moist soil always gets more of each shower and also stores more of what it gets deeper in the soil.

An inch of rain will be all held by

a finely pulverized dry soil with 2½ inches of the surface where it can not be saved from evaporation, but if an inch of rain falls on a moist soil it may spread itself thinly over the moist soil particles for a foot in depth, where a high percentage can be saved.

It may truly be said that to the farmer who hath a moist soil shall be given moisture, and from the farmer who hath not a moist soil shall be taken away, even the rain that falleth on his land.

It is the physical condition of the soil more than the number of inches of rainfall that determines the quantity of water available to the growing crop during the season.

Windbreaks—One of the Necessities of a Prairie Farm.

EDITOR KANSAS FARMER:—I have just been reading an article, written by Silas Wright, of Pennsylvania, relative to the realization of the value of timber for windbreaks. The article showed that until recently the farm lands and buildings on the eastern slopes of the Alleghany Mountains were abundantly protected from the northwestern cold waves by the native woods which had been reserved for the timber, it being considered as one of the necessities of the farm for fencing, fire-wood, and lumber. And yet while the residents of that country were daily enjoying the protection and comforts afforded by these timber belts, they did not fully realize from whence these comforts came until high prices for railroad-ties, wood-pulp timber, tan-bark, etc., induced the land-owners to cut the timber all off. Now, when it is too late they realize their folly. They look back and see that much of their fine crops, home pleasures and comforts are attributable to these protectors against wind. Now the cry is coming up from all over that devastated country, demanding immediate action in tree-planting.

Suppose we now reverse the scene, and turn the horoscope upon the western plains, where no tree or bush obstructs the view or checks the plow; we set our stake upon the wide expanse; the wind whistles a doleful requiem around our lonely cabin; we sow and reap in the heat of the midday sun; our animals wear the flesh from off their bones fighting flies, with no shady tree to protect them from the scorching rays, the hot blasts from the south burn our crops; yet we scarcely realize the fact that most of these discouraging features of the prairie farm can be overcome. Of course if our farms had once been surrounded by timber belts or dotted with shady groves and we had done as our eastern friends are doing, we would then have a vivid conception of what is meant by "windbreaks" or "timber protection." But, as it is, we have sufficient evidences in belts and groves scattered here and there over the state showing the great advantages derived from timber, which should influence the planting and cultivating of more forest-trees than it does. We often hear a thrifty farmer say that his timber belt on the south of his farm saved his crop from the hot winds. The horticulturist is fast learning that a windbreak around his orchard largely increases his fruit crop. The stockman has long since learned that his cattle will do much better when they have timber protection in the winter and shade in the summer. These are facts that we are learning faster than we are applying the knowledge. I am not, in this article, appealing to brother farmers to plant forest-trees as a financial proposition; yet no man can plant a tree but what in some way he will be benefited many times its cost. A few rows of trees around the entire farm will largely increase its value, besides increasing the production of grain, fruit, and stock, and being a source of great comfort and pleasure to the occupants.

No farmer dare say "It is too expensive. I can not afford the cost," for when all expense is told—preparing ground, buying trees, and planting them out—it will not amount to one cent a tree. A thousand trees for \$10, and worth \$1,000 to any farm. Every farmer can plant a few each year and not feel the expense, and by setting valuable trees he will not only be increasing the value of his farm, and have better crops, more fruit, and fatter cattle, but in a few years will have an ample supply of fence-posts and fire-wood from the necessary trimmings of his timber belts.

There are three or four species of forest-trees adapted to the prairie country, that not only make good shelter belts or windbreaks but valuable posts and lumber. We would name the catal-

pa speciosa, Osage orange, black, and honey locust.

To give some idea of the value of the catalpa, we will quote an extract from a letter received a few days ago from the Hon. Robert W. Furnas, ex-Governor of Nebraska. In speaking of forest-trees he says: "I have a few catalpas 25 years old, that measure six feet in circumference. Of the lot I planted twenty-five years ago, I put out some posts when the trees were 10 and 12 years old. They are good yet."

The above goes to show that there would be no mistake made in planting this as one of the windbreak trees. It also has the advantage of reproducing, that is, when the tree is cut down, a sprout starts from the stump, making another tree in a very short time.

At all events, I hope to hear of every farmer in the state planting a few forest-trees of some kind every year.

D. C. BURSON.

Topeka, Kans., Collaborator for the Division of Forestry.

Farm Notes.

Do not allow manure-making materials to go to waste.

Better let manure leach in the field than in the lots.

Use the soap-suds and wood-ashes around the fruit-trees.

Males are often injured by being used for breeding when too young.

Smooth shoes are worse than no shoes at all on slippery roads.

Good care is worth more to stock than all of the medicine you can buy.

Keep the brood mares, expected to foal, separate from the other horses.

Never breed immature stock, as both size and form are injured.

Plan out the spring work as far as it is possible to do so; it will save time.

To reach the best results from feeding, keep each animal as regular at feeding as possible.

Overeating and consequent foundering is one of those things easier prevented than cured.

For the commercial orchard a safe rule is, few sorts and those well-known in the market.

The muddy season is hard on horses; make the loads to correspond with the condition of the road.

The object to be attained in feeding is to get the animal to digest all that is consistent with health.

Plan the work and crops so that the farm can be made to produce all that it is capable of producing.

It is better to ease up the work of the horse and cure a sore shoulder than to keep going until the horse is disabled.

If at any time an animal on the farm shows signs of running down, give it better feed and care.

Sulphur and sweet oil mixed to a thin salve is an excellent remedy for scratches and other diseases in horses.

The keeping of the farm implements in a good condition is an important factor in the cultivation of all the crops.

With all kinds of stock, it should be remembered that successful stock-raising is impossible without healthy stock.

So far as can be done, plan to have several pastures so that the stock can be changed and need not be kept in one pasture.

As soon as the frost is thoroughly out of the ground, it will pay to roll the meadows, the fall sown wheat, and often the oats and newly seeded grass.

Before the spring work gets too pressing, the harness should be thoroughly cleaned, repaired, and oiled. It will save time and trouble later on.

While it is an item to plant corn early, it should not be hurried so as to plant before the soil is prepared in a good tilth. A fine mellow seed bed means a good deal in the cultivation of corn.

Let the grass secure a good start before turning the stock in the pastures. If grazed upon before they have made a good root growth and gathered considerable vigor, the grass plants are slow to start up again and their growth is feeble.

It will add to the profits of the farm, if in undertaking anything you understand the materials to be worked, and the time and circumstances under which the work must be done, as well as the object to be attained.

Sheep should never be kept beyond the age of thrift and vigor. Feed and care will bring better returns when bestowed upon young stock, for young stock put on more flesh for the same quantity than the older ones.

Eldon, Mo. N. J. SHEPHERD.

The Fallacy of Boils.

"It is an unshaken article of belief with most people that skin diseases are almost always catching; that they

show that the sufferers themselves or their parents are no better than they should be; that they indicate that 'the blood is bad,' that you must be careful or you will 'drive it in,' and the patient will die, if nothing more, and that a boil is worth five dollars in doctors' bills saved. They are all wrong, teetotally wrong, on the very best medical authority. Not more than two or three of the hundred or so skin diseases catalogued are catching, and the chances are that the eruption is as innocent and as innocuous as a cold. If there is such a thing as 'bad blood,' medicine has not found it out. Next to nothing is known in regard to the condition of blood in disease. Chemical and microscopical study has utterly failed to show that there is any difference between the blood in health and the blood in cutaneous disorders. Certain of them are symptomatic of nervous breakdown, and imperfect digestion causes others. Tomatoes, bananas, strawberries, shellfish, and other articles of diet, harmless to most of us, cause a rash to break out on others. Evidently the medical profession does not fear 'driving the disease in,' for the treatment for cutaneous affections is now wholly local. A boil is an acute inflammation of the tissues surrounding the hair-follicle, and is due to some infection of the follicle by a germ, generally the staphylococcus pyogenes aureus. I thought you might like to know the name. Boils come upon the just and the unjust, on those who have good and those who have bad blood. What forms inside the tormenting thing is not the strained-out impurities of the blood, for pus does not exist in the blood. It is of local formation. A boil is not worth five cents, yet alone five dollars. It is just what your untutored imagination says it is, a confounded nuisance. If anybody owed me five dollars and could either pay it in cash or boils, which ever I preferred, I should take the cash every time, even at a discount. I think I should get more comfort that way."—Ainslee's Magazine.

Queen Louisa of Prussia.

The awful oppressions and hardships during those dreary years of French occupation but served to bring into the clearer light of day the noblest traits in the character of the persecuted queen. Individual cases of suffering from the calamities of war were relieved by her whenever possible. The private revenues of the king and queen were all surrendered for the public good. The letters of Louisa to her father and others abound in sentiments of heroic devotion to her country's just cause. To her father she writes: "I am convinced that through steadfastness, and that only, we shall conquer. I turn my eyes to Heaven, whence all good must come." To her eldest son,

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Cream Separators

are now ready for the trade. They have proven a marvel in Cream Separator construction and results attained through their use astonish experts and appall all competitors.

The Empire No. 1

has a bowl weighing only 4½ pounds, only 2½ inches in diameter, only 4½ inches deep with only four parts to the skimming device and with a skimming

Capacity of 250 lbs.

per hour. Never before was a separator bowl of such size known to handle this quantity of milk successfully. On account of being so light, it is easy to turn, easy to handle and so simple it is easy to clean. Machines of greater capacity are equipped with bowl of comparative size. Our new catalogue tells about them and contains much of interest to you. It is free. Send for it.

United States Butter Extractor Co., Bloomfield, N. J.



the future king, she wrote: "Deliver your country from the shame, reproach, and humiliation under which it groans. If, however, you fail to lift up th's fallen monarchy, seek death as Louis Ferdinand sought it." At Konigsberg and at Memel the royal family lived as their own subjects lived, eating their frugal meals, with the queen often in tears, and with nightly fears that the enemy might come upon them while they slept. Once the queen, though suffering from typhoid fever, had to be removed in the night from Konigsberg propped up with pillows and enveloped in blankets; death on the highway in a binding storm being preferable to captivity.

The defeat of the Allies at Friedland was the last dreadful blow to Prussian hopes. The life of the nation was being crushed out. The very existence of Fatherland was imperiled. As was his policy after victory, the French emperor offered Prussia peace with the restoration of her territories, but coupled with a condition to which an honorable man like the king of Prussia could not accede. That condition was that he should desert his allies, Russia and England, and leave Prussia to be used as a base of military operations against Russia. Never was the price of dishonor placed so high. Interest, dynastic ambition, love of country, everything the hearts of the king and queen longed for were placed in the one scale and base treachery and a bald breach of faith, in the other. His Prussian majesty replied to the tempter that much as his distracted kingdom desired peace and abhorred dismemberment, peace with dishonor was not wanted—the only reply a man of honor could have given or a man of honor should have expected.—J. Q. Howard, in Cram's Magazine for March.

The BUTTER SCORING the HIGHEST 98 POINTS

At the National Creamery Buttermakers' Convention, St. Paul, Minn., Feb. 18 to 23, 1901

Was the Product of the U. S. Separator

This butter was made by Edw. H. Webster, Ames, Ia., and scored one point higher than the butter entered by Mr. Quenvold, which received a Gold Medal

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Our "would-be competitor" claims to have had 35 times as many entries at the Convention as the United States, and for all the latter had so few chances, in comparison, of winning yet the Judges reported the U. S. product the Best out of 829 packages, another proof of the

SUPERIORITY of the IMPROVED U. S. SEPARATOR

We also call attention to the GOLD MEDAL IN THE GATHERED CREAM CLASS which was awarded W. C. Noble, So. Waterford, Me., whose butter was the Product of Improved U. S. Separators and Cooley Creamers.

Remember we are Pioneers in the Cream Gathering System and lead in that the same as in everything else in the Dairy and Creamery line.

When you see our "would-be competitor" claiming everything at the Convention, just bear the above facts in mind, also that

THE BUTTER SCORING THE LOWEST, 75½ POINTS, WAS THE PRODUCT OF THE DELAVAL SEPARATOR.

Write for Circulars telling of many other victories of the U. S. VERMONT FARM MACHINE CO. BELLows FALLS, VT.

Horticulture.

The Best Plums.

F. A. WAUGH, FORMERLY OF KANSAS, HORTICULTURIST, VERMONT AGRICULTURAL STATION, BURLINGTON, BEFORE THE WESTERN NEW YORK HORTICULTURAL SOCIETY AT ROCHESTER, N. Y.

The selection of the best plums presents peculiar difficulties to the horticulturist. The first of these is in the multiplicity of cultivated types. There are ten to fifteen distinct botanical forms—as distinct as pears from apples—growing in our orchards. These are the Domestic plums, the Damsons, and the Japanese plums, the Americanas, Wildgoose, and Chicasaw plums, besides several other classes, not to mention a confusing list of hybrids combining the good or bad qualities of many diverse sorts. Moreover, these botanical forms already enumerated are by no means indivisible. Among the Domesticas, for instance, we have such very different types as the Green Gages, the prunes, the egg plums, and others. Among the Japs we have the Bolton type, represented by Burbank; Abundance and other popular northern varieties; Kelsey, strictly southern fruit; Satsuma, totally different from all the others.

The second difficulty in making a selection of plums adds itself directly to that already considered. For, not only are the types and varieties multifarious and perplexing in the extreme, but even a single variety will sometimes develop inconsistencies of behavior and vagaries of habit, such as one would expect in candidates for a senatorial nomination. It has come to be a notorious fact that in this country that the different Japanese plums will not blossom nor ripen in the same order in different parts of the country, nor even in the same orchard, one year with another.

The third peculiar difficulty which besets the man who plans a plum orchard, is the lack of conventional commercial ideal. The man who plants apples knows that he must have a solid, sound, late-keeping, big, red fruit. The man who plants peaches must have a large, yellow, freestone variety. The pear growers must have a solid, smooth, good-colored fruit. These demands are so explicit that they have become conventionalized in certain concrete market standards. The plum planter has no such guide. In some markets one variety will sell; in others another. The large majority of cooks and plum users, moreover, do not know the difference between Wickson and Frogmore Damson. This is a good thing for the plum grower, on the whole, I think; but it adds to the difficulty of choosing varieties.

About a year ago, for a special purpose which I had in view, I sent a circular of inquiry to leading plum growers all over the United States and Canada, asking, among other questions, for a list of preferred varieties. As might have been foreseen, these lists presented the most remarkable disagreements. Not a single variety was mentioned by half my correspondents; and some of the chiefest favorites of some of the best men were utterly ignored by all the others. It is evident, therefore, that no single list of the best plums can be made which will serve under all circumstances. In other words, the selection of any single variety depends, not merely upon what the variety is itself, but upon all the circumstances under which it is to grow. This is a fundamentally important and a very obvious principle, but one which has been repeatedly forgotten in horticultural discussions. This principle may be expressed by saying that no variety can exist nor be judged separately from its environment.

As soon as we have taken up the study of varieties on the basis of this fundamental principle, we begin to discover that there are certain laws underlying the relation of the one to the other, and that every generalization of these laws tends to make our work easier. Such generalization will apply doubtless to all classes of fruits so that if we discover what rules govern the selection of the best plums, we shall be in a fair way to select also the best pears and the best peaches. Indeed it was largely for the discussion of these more fundamental laws, that I chose to inquire which are the best plums. The

environment of the plum orchard may be analyzed into four principal effective factors. These are (1) the soil, (2) the climate, (3) the market, (4) the plum grower. Those are arranged approximately in the reverse order of their importance.

THE SOIL FACTOR.

It may fairly be said that plums can be grown in any soil on this continent which will grow beans. If there are any exceptions to this statement they are of such minor importance that they may be disregarded. No single variety or type of plums, however, will thrive in all soils. The Domesticas prefer heavy, somewhat clayey soils; the Japanese plums take better to lighter, gravelly, well-drained soils. The Chicasaws and some of the Wildgoose type do better on light sand. The Americanas prefer the rich alluvial river bottoms of the Mississippi valley. Local and comparatively small differences of soil seem to exert a great influence at times. How else can we account for the success of Satsuma in one county and its complete failure in the next, and for many similar cases?

THE CLIMATE FACTOR.

Nothing is more striking in the whole study of pomology than the climatic range and climatic adaptations of our cultivated plums. The Americanas are hardy on the bleak northwestern prairies the Chicasaws thrive away down south, the Wildgoose varieties are at their best only in the south central states, the Domesticas are fully at home only in the narrow strip of land running from Boston to Albany, Rochester and South Haven, Michigan, and in the Pacific Coast regions. Kelsey grows only in the south; Haweye only in the north.

THE MARKET FACTOR.

It has already been said that the plum market is by no means so exacting as the apple market or the strawberry market. We may fairly expect that it will become more so, and that in the future it will exercise a much greater influence in determining which are the best plums. Even now certain markets call for Damsons, others for Italian Prune, others for Green Gage (orders filled mostly with Bavay), others for Wildgoose and others for De Soto, Weaver and Quaker. Under present circumstances it is often a matter of no little difficulty to determine just which varieties are most acceptable to a given market. In many places the housewives, who can or preserve the plum grower's output, will accept any clean, attractive plums which are offered, or are only able to specify that they want "the same kind they had last year—those big red ones."

THE PERSONAL FACTOR.

The personal factor has almost always been underestimated in the selection of varieties. It may be said very positively that, in no other group of fruits has it such influence among the plums. There are men here in western New York, who consider the European plums the only ones worth growing, and all others as "suited to regions where the Domesticas will not succeed." There are men in the northwestern states who are just as sure that "American plums are best for America." I know several very successful plum growers who think that it is wasting time to plant anything but the Japanese varieties. Now these are, for the most part, merely personal opinions—hardly more than whims. Nevertheless, they are supremely significant to the men who hold them. If one man loves trotting horses and another Pekin ducks it would be folly for the two to trade hobbies. It would be just as foolish for the man who sees his ideal in the Japanese plums to try to grow those of the Wayland class; or for him who prizes his Lawrence and Pond and Emperor to try to grow Burbank, Satsuma and Georgeson.

So much for the environmental factors. The plum itself has now to be considered: for soil, climate, market and plum grower are nothing unless the variety in cultivation has the qualities to meet specified requirements. The principal factors which go to make up the variety as it is known to the practical grower may be roughly enumerated as follows: (1) hardiness, (2) habit of growth, (3) fruitfulness, (4) pollination affinities, (5) resistance to disease, (6) season, (7) quality, (8) ability to stand shipment. Just a word or two regarding each of these will be sufficient.

HARDINESS.

Plums vary greatly in this quality; but in almost every locality the list of varieties which may be relied on is so large that growers have not been very attentive to this matter. In the north-

western states only, where winters are very severe, it has been found that none but the Americana and Miner-like varieties can be depended upon; and consequently they have practically supplanted all others.

HABIT OF GROWTH.

Many of the plums now in cultivation are cursed with the most objectionable habits of growth. This is true of the native plums as a whole and almost without exception. They are wild and wayward growers. They seldom make good, nicely shaped tops. They may be symmetrical and comely enough during youth, but old age brings out their wild and untamed nature. They resent pruning and training. The tops get so full of zigzagging twigs, dead branches and thorns that the blackbirds can't get in to build their nests and are obliged to fly away to the apple orchard. I think that those enthusiastic western plant-breeders who are bending their most praiseworthy energies to the production of native plums with larger fruit and thinner skins, might well spend some pains to get a variety of tree amenable to the practices of civilized horticulture. There are very few plum trees, however, of any type or class, which make comely, manageable trees.

PROLIFIGACY.

Many varieties of plums bear too much and too often. Many varieties will bear themselves to death if left alone. There are few sorts, indeed, which one need reject on account of shy bearing, though there are a few, of which General Hand and Wickson are perhaps examples. For the rest the grower has rather to plan for careful thinning of the fruit.

POLLINATION.

Plums have to be selected somewhat carefully with a view to their proper pollination. This, however, is a subject by itself, and has been so often discussed of late that we may safely let it pass here.

RESISTANCE TO DISEASE.

The principal diseases which attack the plum are monilia, or ripe rot of the fruit, and black-knot. Both of these diseases can be controlled by proper management; and the careful plum grower will therefore take small thought for the selection of varieties which shall be exempt. Most of the so-called "iron-clad" and "immune" varieties, moreover, have proved not to be so iron-clad nor so immune when it comes to the test. We used to hear that the Japanese plums were not subject to the attacks of the black-knot; but we now know better. There are measurable differences among varieties in their susceptibility to disease, and this may be a consideration, though hardly ever a prime consideration, in the selection of varieties.

SEASON.

The man who grows plums for himself wants them at all possible seasons of the year; and with the varieties now at our command we may have them from July till frost comes. For market either very early varieties or very late varieties seem to be best. The early varieties sell at the fruit stands for eating fruit, and the late plums are canned by the thrifty housewives after the days get cooler and vacation time is over.

QUALITY.

Plums vary immensely in this respect. And even in the market quality still has a rating with plums. Nevertheless the purposes to which the fruit is put are so various, and the tastes of the consumers so divergent that no single plum nor any group of plums can be pointed out as the standard of quality. All we can say is that quality must be considered; but just what may be considered of it no one can say except he knows all the circumstances.

ABILITY TO STAND SHIPMENT.

This quality comes as near being measurable in absolute figures as any we have to deal with. Some plums will not ship; while others will stand almost any kind of rough usage. Such varieties as Italian Prune, German Prune, Grand Duke, Blue Imperatrice, Burbank, and the Damsons are all good shippers, and there are many others.

Having spent so much time in discussing general rules, I shall not now neglect to specify certain plums which I consider among the best. After the emphasis which I have laid on the importance of personal preference in the selection of varieties you will naturally expect me to be very charitable in disagreeing with other men's opinions on this subject. Nor could I insist that any one accept my judgment without revision. Nevertheless, if I could grow all classes and varieties with equal success, I would certainly give premi-

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BERRY PLANTS. Smith's Nineteenth Annual Catalogue, in a nutshell of conciseness, treats of berry 'and berry plants, berry planting, berries large and berries small; in fact, berry-growing made plain for farmers, bankers, lawyers, doctors. If you want to buy plants, catalog is free for asking. Otherwise, 5-cent stamps. E. F. SMITH, Postoffice Drawer C, Lawrence, Kans.

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CANDY CATHARTIC Cascarets REGULATE THE LIVER

nence to the Domesticas—that is, if I were to be the chief consumer. For my own eating I would like such varieties as Bavay, McLaughlin, Lawrence, Jefferson, Duane, and Emperor (Sharp's Emperor, or Victoria).

After having selected the best of the Domesticas, I would stand in doubt whether to give next place to some of the Japs or to some of the better Americanas, providing always the two classes could be grown with equal success—a condition which does not exist anywhere in the United States, so far as I know. The Japanese varieties look better and are better for canning; but the best Americanas are of better quality for eating out of hand or with sugar and cream. Naturally, I would compromise a question like this by planting both. For the northeastern states, Burbank is the most generally useful of the Japanese plums, after which come Abundance, Chabot, and Red June. Among the Americanas I would try to get along with Hawkeye, Weaver, Stoddard, Quaker, and Free Silver. The last named I have never eaten, but it looks well and I would plant it on the recommendation of Captain Watrous, John Craig, and Mr. Terry.

After these, I would want some plums for spicing and for jelly, and, if I could grow just what I wanted, these would certainly be Wayland. Next to Wayland I would choose Moreman, which is better known northward and which does better in some localities.

The new hybrid plums are very interesting, but no one of them has yet proved a right to a permanent place in northern orchards.

In the Wildgoose country, Gonzales may be planted with considerable confidence; and it is a fine plum. In this section Wickson is still the most promising hybrid for trial, though most trees have borne little but disappointment thus far, "and not much of that."

In choosing varieties for market one must strive to overcome his personal likes and dislikes to a greater extent than when planting a family orchard. Now it would be very hard to say which are the best market sorts. In western New York, the most profitable varieties seem to be Bavay (Reine Claude); Italian Prune, Pond, Diamond, Monarch, Grand Duke and the Damsons. In some Grand Duke, and the Damsons. In some Simon plum (*Prunus simonii*), is one of the most profitable. In the central states Wildgoose and its near relatives have often proved the most profitable varieties; and in the cold northwest, where they can grow nothing but the Americanas, that class has naturally paid better than Kelsey and Golden Beauty.

In the present condition of our pomological industries the most profitable plums for market must be determined anew for each particular case. The experience of neighbors furnishes only a suggestion. It is not an infallible guide. Perhaps when our fruit markets are better developed and when plum growing as a business becomes more refined in its practices we may settle down to a few standard market varieties and eliminate the rest. May that time be long delayed! We have too many good things in our plum orchards at present to sacrifice any of them to the arbitrary and unreasonable dictates of the commission man.

Black-Knot of the Plum and Cherry.
PURDUE UNIVERSITY AGRICULTURAL EXPERIMENT STATION.

The opinion is quite prevalent among farmers, and many fruit growers, that the disease known as black-knot, so often found upon plum and cherry-trees, is caused by certain insects. It is true that we may often find upon cutting open these knots, the larvae of certain insects, but it is a universally recognized fact, among those who have given the matter careful attention, that these unsightly, knotty excrescences are due to a special fungus which is almost always confined to the plum and sour cherry. The insects are there, because they find these knots to be good breeding places.

The swellings are first noticed in early spring, often as soon as growth begins. They are then of a yellowish color, but get darker with age. In May and June, a crop of spores, which answer to seeds in higher plants, appears on the surface of the knots, resembling to the naked eye a soft, downy covering. This soon disappears, when the knots continue to get darker until winter, when they have the characteristic black color, which makes them so conspicuous at this season of the year. If examined carefully late in the fall, the surface of the knot will be found to be covered with a great many mi-

nute pimples or elevations, each one of which is a fruit of the fungus in which the winter spores are contained. These are in turn distributed later on, and find a lodging place in the crotches of limbs and in the openings of the bark, and at the junctions of the annual growths. As these spores germinate they send their vegetable organs into the growing tissues of the branch, causing swellings, which often extend along the branches 4 or 5 inches. These vegetable tissues do not all die during the winter, but some live over and so new swellings at the edges of the old ones may be seen the following year. In this way the branch may continue to be infested until finally it becomes completely surrounded, when the circulation is cut off and the branch dies. When these knots appear upon several branches at the same time, it is only a question of a very short time before the tree will die.

Treatment:—The treatment generally recommended is to cut off the knots and burn them, which is a good thing to do, if it is done before the winter spores have been distributed. If not, then some additional treatment will be necessary. It is recommended, therefore, that all "knots" be cut off and burned during this month (February), and in addition to this, spray the trees with a strong solution of Bordeaux mixture during the first warm days of spring. About the time that buds start, spray again with the ordinary strength Bordeaux mixture. This ought to destroy all of the winter spores. Then in case the branches may have been already infested the previous year, they should be sprayed again during the latter part of May and the first of June. The young knots may be destroyed by painting them with chloro-naphtholeum or with pure kerosene oil. Whenever these remedies are thoroughly applied there will be no trouble in controlling the disease, providing all old, worthless trees have been cut out and burned and provided, also, that the people of the entire neighborhood cooperate in this plan of action. Wherever the Damson plum is grown this disease is almost sure to be present; and as it is one of the "injurious plant-diseases" referred to in the Indiana inspection law, the necessity for prompt action on the part of all owners of infested trees will be evident to all.

Which is the Cheapest Berry to Grow?

EDITOR KANSAS FARMER:—Which is the most profitable berry in proportion to the amount of work required, and which has the longest period of ripening? The blackberry can be grown with less work than the raspberry or strawberry. The junberry also can be grown with little labor after the first year. The blackberry has the longest period of ripening, about sixty days. The Early Harvest commences to ripen twelve to fifteen days before other varieties or even the wild ones. The Kittatiny has the longest period of ripening, is the largest and latest.

Twenty-four years ago, I planted an acre each of strawberries, raspberries, and blackberries. Box material cost more than four times as much as now and shipping charges were double, so I was confined mostly to home market. I had to peddle every town to sell \$8 to \$10 worth a day of strawberries and raspberries. Blackberries would not sell at all. The blackberry now is the most profitable berry to grow. I had no competition and was often asked, where in the woods do these large berries grow. I had to give many boxes away to induce people to buy the next day. It was more difficult to cultivate the people's taste than the berries, as they grew and yielded wonderfully. The demand more than trebled year after year. It is strange indeed that more farmers don't grow enough berries for their own use, the cheapest, healthiest diet they can grow and eat, like milk and butter at first cost. JACOB FAITH, Montevallo, Mo.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that can not be cured by Hall's Catarrh Cure. F. J. CHENEY & CO., Props., Toledo, O. We the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm. WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all druggists. Testimonials free. Hall's Family Pills are the best.

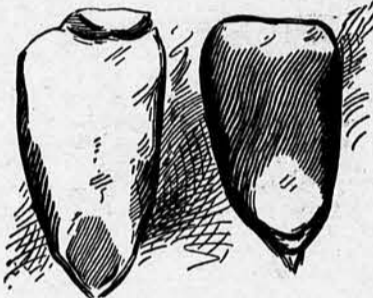
Send at once for agents' terms and sample copies.

FARM SEEDS

Feeding Value.

It seems strange that there are so few farmers who realize the difference in the feeding value of the various kinds of corn. With most cattle feeders corn is simply corn and all kinds sell at the same price. A few years ago the writer visited a place where there were a number of breeders of fine cattle. Common corn was selling at 48 cents per bushel, but the breeders were paying 60 cents for Iowa Gold Mine.

We could scarcely believe that any variety was worth such a premium (25 per cent), but they informed us that they had figured that there was a saving of 6 pounds on the cobs, an average bushel of Iowa Gold Mine producing at least 62 pounds of shelled corn and also that the corn had a soft grain which all digested. Chemical analysis of the manure proves that a large per cent of corn passes through animals without digesting and this is specially true of the pearly or flinty grained sorts. Cut a grain of corn open with a knife and see the proportion of flinty substance that it contains.



The above illustration shows two kernels of corn which have been cut in two. The dark shading shows the flinty part of the grain, the Iowa Gold Mine at left having very little of it, while the Leaming at right is quite flinty, and still it has a less proportion than some other sorts. Watch the chickens scratching over the fresh manure for the undigested corn and then figure how much money you are throwing away. The Iowa Gold Mine, Iowa Silver Mine, Profit, and Lenoche's Homestead are four of the softest grained and easiest digested corns on the market and are, therefore, the most valuable kinds for feeding, but if you are growing corn for selling on the market, possibly the Star Leaming, Improved Early Masodon, Legal Tender, or some other sort will answer your purpose. Every one who grows corn and is interested in increasing their crop and improving its feeding value are invited to write to the Iowa Seed Co., of Des Moines, Iowa, for a copy of their special Seed Corn Catalogue, which contains much information of value to every farmer. Be sure to mention this paper in writing them. A postal card request is sufficient.

Long Wearing Farm Implements.

When a farmer buys an implement to assist in the cultivation of his land, he rightly expects it to do all that the makers claim for it, besides which he expects it to give him lasting service. Unfortunately these expectations are often not realized, and besides faulty operation, many implements last but a few seasons. The high quality of the harrows and land rollers made by the Roderick Lean Manufacturing Co., of Mansfield, Ohio, has won



a high place for their goods, farmers everywhere being enthusiastic in their praise for them.

A letter recently received by the company from one of their customers contains convincing proof of the superior quality of the Roderick Lean Manufacturing Co.'s harrows. The writer of this letter, Mr. J. O. Robinson, of Wauseon, Ohio, states under date of February 22, 1901, that twenty-four years ago his father purchased a Lean harrow, and in spite of the fact that



over 100 acres a season were dragged with it, the total expenses for repairs during that time, aside from the cost of one set of new teeth did not exceed \$1.50, and in Mr. Robinson's own words, the harrow appears good for twenty years more. Every harrow and roller made by The Roderick Lean Manufacturing Co., is built to wear, to do what is claimed for it and to give lasting satisfaction. Lean harrows possess many points of superiority over other makes; they are all steel, are light and strong, are carefully constructed throughout and the teeth are adjustable by an original mechanical device that will at once commend itself to users. An illustrated circular describing the Lean harrows and land rollers will be sent to anyone interested.

Choiceest new varieties of Seed Corn, Oats, Wheat, Barley, Dwarf Essex Rape, Potatoes, Artichokes and all kinds of field and grass seed. Large illustrated catalogue of great value to farmers free, if you mention this paper. IOWA SEED CO., Des Moines, Iowa.

GOOD SEEDS CHEAP

BEST on Earth.
Only 1c to 3c per pkg.
Postpaid & all TESTED.

GRAND lot of extra packets in all orders.

I control large Plantations in many States, and Europe. Rare & New sorts cheap. Seed in bulk by lb. & bu. cheaper than any grown. Fruit Trees & Field Seed low. FREE illustrated Big Catalogue. Send address. Also those who want SEEDS. R. H. SHUMWAY, ROCKFORD, ILLINOIS.

Better Sure than Sorry

Buy the seeds that have been sure every year for more than 40 years. Many seed buyers have been sorry they did not get

Gregory's Seeds

No one was ever sorry he bought them. Our three guarantees make you sure. New catalogue free.



J. J. H. Gregory & Son, Marblehead, Mass.

YOUNG'S STANDARD SEEDS
Are Pure and Reliable.



Trees. Fruits. Roses.
WE GROW THE BEST.

Our Beautiful Illustrated CATALOGUE of 100 pages is what you need if you have a garden. Write for it at once. MAILED FREE.

YOUNG'S, 1414 OLIVE ST. ST. LOUIS, MO.

EVERGREENS

Hardy sorts, Nursery grown, for wind-breaks, ornament and hedges. Prepaid, \$1 to \$10 per 100-50 Great Bargains to select from. Write at once for free Catalogue and Bargain Sheet. Local Agents wanted. D. Hill, Specialist, Dundee, Ill.

The Reason Why



30,000,000 ACRES of the BEST GRAIN GROWING and GRAZING LANDS on the continent are being offered FREE is that settlement of these vast areas is required by the Government of the Dominion of Canada.

Location near lines of railroad already built or under construction in MONTANA, ARIZONA, ALBERTA and SASKATCHEWAN, most favored districts in Western Canada.

Thousands of Americans have taken advantage of the offer made to secure

Free Homes.

Deep soil, well watered, wooded, wheat averages 25 to 40 bushels per acre; oats 50 to 100 bushels, and other grains in proportion. Cattle thrive and fatten on the native grasses. Fuel abundant, climate healthiest in the world, social conditions the best. Educational advantages unequalled. Taxation nominal.

Free Farms of 160 acres to every male of eighteen years of age, and to every female head of a family. Railroad and Government Lands for sale at low prices. For fuller information apply to F. Pedley, Superintendent of Immigration, Ottawa, Canada, or to

J. S. CRAWFORD, 214 W. Ninth St., Kansas City, Mo.

Special low excursion rates during February, March and April.

.....BERRY'S IMPROVED.....

ARTICHOKES.

Cheapest hog feed on earth. Yields from 300 to 1,000 bushels per acre. Harvested by the hogs, themselves and grow fat. If you raise hogs you cannot afford not to grow them. 65 cents per bushel; \$2 10 for four bushels—enough to grow one acre.

SUCCES BEAROLENS BARLEY, 65 cents per bushel; CHAMPION OATS, 40 cents per bushel; SEED CORN, SPELTZ, POTATOES, TIMOTHY, CLOVER, BLUE GRASS, all varieties of Grasses, Garden, and Flower Seeds; best cheaper than any one. Catalogue tells all about it. It's free. Ask on a postal card for it. Address—

Box 60. A. A. BERRY SEED CO., Clarinda, Iowa.

Publisher's Paragraphs.

The Studebaker Bros. Mfg. Co. of South Bend, Ind., have an advertisement in this issue of our paper. It will be found on another page and we wish every subscriber to read it. That is why Studebaker Bros. put it there. They believe that our readers have need of the goods they are manufacturing, and we believe it also. You can not know what they have to say or what they have to offer unless you read their announcement. We scarcely need tell you who they are. You have seen the name "Studebaker" on wagons so frequently that you must know that they are the largest wagon and vehicle manufacturers in the entire world. You must also know that their goods have a world-wide reputation for honesty in material, construction and wearing ability. Write them for catalogue and other printed matter. You will not only thereby help us and them, but you will also help yourself.

Threshing machinery "a little better than the best," was the impression made by the receipt of a very handsome 60-page catalogue from Nichols & Shepard Co., Battle Creek, Mich. Any of our readers who intend purchasing any threshing machinery should not fail to receive this catalogue. The manufacturers have had fifty-three years of continuous and successful business, without change of name, location or management. A proud record for any manufacturer. Their line of traction engines, separators, wind stackers, self-feeders, and steel frame horse-powers, is a line of as reliable, modern, high-grade threshing machinery as can be obtained anywhere on earth. This firm has branch houses at Kansas City, Des Moines, Indianapolis, Nashville, Fargo, Mansfield, Ohio; Milwaukee, Bloomington, Ill.; Lincoln, Neb., and Minneapolis, Minn. There is not one little section of this great country of ours in which their machines are not known, used, and appreciated. Indeed, they are almost equally well known in foreign countries. Their advertisements will appear from time to time with change in our paper. Our readers should follow the matter closely. It will not only prove interesting, but valuable and instructive as well.

There is a Gardener Over in Minnesota.

Seven years ago he worked at \$8.00 per week. He heard of the John A. Salzer Seed Company, La Crosse, Wis., read their great catalogue, saw a good thing, rented 20 acres, planted Salzer's vegetable seeds; cabbage, onions, potatoes and small fruits. Now he is the owner of a big house, barns, horses, cattle, and 60 acres more land. There is a mint of money in Salzer's vegetable seeds, such as early and late cabbage, radishes, corn, peas, onions, and the like, and it will pay you to get Salzer's great catalogue and read about them. Five cents postage will bring it to your door by mail.

The Rise of the Weekly.

To many people the word "magazine" still signifies a monthly publication—just as the word "newspaper" was associated in the minds of our grandfathers with the city journal that came to the country post-offices every seven days. But the new order of things, which requires a fresh newspaper every few hours, has created an equally imperative demand for the weekly magazine.

This was the theory acted upon when, in 1897, the Curtis Publishing Company purchased the Saturday Evening Post—an old-fashioned miscellany with but a few hundred readers—and set to work to build up a great weekly magazine planned along modern lines. Already the soundness of their theory has been demonstrated, and no one doubts that the weekly magazine has come to stay. Within two years the circulation of the Saturday Evening Post has increased to a paid edition of 310,000 copies weekly, and it is growing at the rate of 5,000 a week.

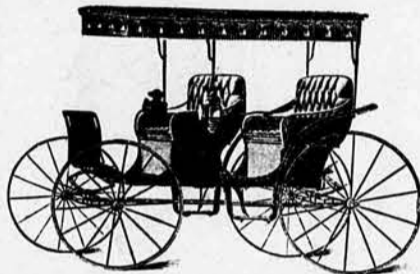
The greatest names in current literature have become identified with the Saturday Evening Post. Young men particularly find in the columns of the magazine a large proportion of articles that are of actual money value to them in their business life. The large staff of contributors who write on commercial and industrial topics is drawn from various walks of life, and includes some of the shrewdest and most successful business men in the country. They number such brilliant financiers as Hon. James H. Eckels, R. C. Ogden, Russell Sage, D. O. Mills, Charles R. Flint, Samuel W. Allerton, Michael Cudahy and Henry Clews.

Some political articles of great significance are soon to appear in the magazine.

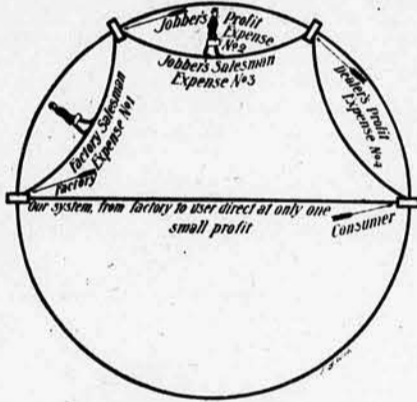
Hon. Charles Emory Smith, Mr. McKinley's Postmaster-General, will contribute a hitherto unwritten chapter bearing on the Blaine-Conkling feud. Ex-President Cleveland will discuss our civil service and suggest practical means by which it may be perfected. William Allen White will write on Carrie Nation and Kansas, and Rear-Admiral Evans will contribute some thrilling chapters from his personal diary kept at sea during war times.

Vehicle and Harness Trade.

We are just in receipt of the new Vehicle and Harness Catalogue of the Marvin Smith Company, of Chicago, Ill. As many of our readers know, this is the large vehicle and harness mail order house which has been a regular advertiser in our paper. Many of our readers indeed are regular and well satisfied customers of this house. This new catalogue is about the most extended and comprehensive we have seen. It is filled with large half-page cuts of all classes and kinds of vehicles. The cuts are large enough to give the reader a very exact idea of the construction of every vehicle. The descriptions are full and complete even to the smallest detail. Thus, by a combination of the two, it is possible for a customer to select to an absolute certainty exactly what he desires in a vehicle and he is not left to guess as to any point of material construction or finish. We illustrate herewith one of the vehicles contained in this catalogue, which may be safely regarded



as a type of style, finish, etc. This job is catalogued under No. A 649 and has the new season's style, canopy top. The fringe and tassels are made to match the seat trimmings. Has fine, oil burning lamps for use at night—a great measure of safety. Beautiful, gracefully bent fenders, high solid panel packs and spring cushions and spring backs. These, with wide, roomy seats and the strong but willow oil tempered springs, make it as easy as a rocking chair. These people will trim a buggy and paint it in any way their customer may wish. Another strong point in their favor is that they guarantee any vehicle they sell for two years. This guarantee means what it says, too. If it were not so, and if we did not know that the Marvin Smith Company can be depended upon to deal fairly and honestly with the people, we would not carry their advertisements in our paper. They send us a little cut which we show here, that explains the directness of their business



methods and the great saving it insures the customer, much better than it can possibly be described. It certainly proves a saying of all that element of expense which goes into the pockets of the middlemen and which the buyer has to pay every time. Write to Marvin Smith Company at once for their new Vehicle and Harness Catalogue. Simply address them at Chicago, Ill. They are old enough and large enough to make a street address unnecessary.

The Modern Way.

Among all the wearisome tasks falling to the lot of the farmer's wife, none are more laborious or tiresome than the care of the milk and butter, under the ordinary conditions, and yet practically nothing is received for all this labor. The housewife, heretofore, has been obliged to keep her milk and cream in most any old place; perhaps in a close pantry, or even a cupboard in a hot, odoriferous kitchen; or, if better facilities were striven for, a cellar was generally the first place sought for; and in the absence of this, the well was often resorted to. In either case, crocks, pans, jars, and pails, almost without number, were the inevitable accompaniment, and necessary appendages of the farm dairy. All these had to be carried up and down stairs, washed, aired, sunned, and scalded, every time they were used, entailing endless work and labor for the housewife. Even this would not be so bad if any profit was derived or remuneration received for all this labor. Every farmer's wife knows that with better facilities and a better market, it would be a profitable business, even if laborious. But, if she could find something to take the place of all these crocks, pans, and pails; and if a better market than the ordinary country store could be opened up within her reach, she well knows that the dairy department would make the farmers more clear, easy, ready money than any other department on the farm.

To meet this demand for improvement in the methods of handling and caring for the milk on the farm, that would come within the reach of the ordinary farmer as regards price and cost of operation, the water or "mix" separator was put on the market to lessen the labor. They did accomplish this result; but when they mixed the milk and water, this ruined the milk and cream, and it was worthless for table use or feeding purposes. This has been demonstrated in hundreds of instances, and these "mix" separators pronounced a failure and returned when possible, as unsatisfactory, on their account. Thus, this effort at improvement has signally failed to accomplish the desired result.

Now, it has been left to the Smith Cream Separator Company, of Des Moines, Iowa, to perfect and place on the market a gravity separator that does not mix the milk and water, and the work is as effective as that done by the separator costing one hundred and twenty-five dollars, while the cost is less than one-tenth of that amount. The "Smith" is sold under a positive guarantee, and is sold for so low a price that the person having but two cows is justified in buying one. In the use of the "Smith" all your crocks and pans are dispensed with, and there is no sour milk from one year's end to the other. By the use of the Smith cream separator, these cares and labors are transformed into mere pleasures; and it is one that every farmer can afford to buy. The advantages gained by using the "Smith" are very fully explained in their circulars. Write them at No. 109 West Locust St., Des Moines, Iowa, and they will be pleased to send you some.

But this is not all that the Smith Separator Company is doing for the farmer, by any means. They not only furnish the

Advertisement for American Field and Hog Fence, featuring a grid pattern and text: 'HOG, HORSE, CATTLE, DOG, Sheep, fire and water and snow drift proof. The fence that fences—cheap and lasts a lifetime—AMERICAN FIELD AND HOG FENCE. If you cannot find our local agent write to American Steel & Wire Co., Chicago or New York.'

DR. HENDERSON 101-103 W. 9th St., Kansas City, Mo.

A Regular Graduate in Medicine. Over 30 Years' Practice—22 in Kansas City. The Oldest in Age and Longest Located. Authorized by the State to treat CHRONIC, NERVOUS AND SPECIAL DISEASES. Cures guaranteed or money refunded. All medicines furnished ready for use—no mercury or injurious medicines used. No detention from business. Patients at a distance treated by mail and express. Medicines sent everywhere, free from gaze or breakage. No medicines sent C. O. D., only by agreement. Charges low. Over 40,000 cases cured. Age and experience are important. State your case and send for terms. Consultation free and confidential, personally or by letter.

Seminal Weakness and Sexual Debility

Can stop night losses, restore sexual power, nerve and brain power, enlarge and strengthen weak parts, and make you fit for marriage. Send for book. Radically cured with a new and infallible Home Treatment. No instruments, no pain, no detention from business. Cure guaranteed. Book and list of questions free—sealed. Blood poisoning and all private diseases permanently cured. Permanently cured in a few days without pain or danger. For both sexes—96 pages, 27 pictures, with full description of above diseases—the effects and cure—sent sealed in plain wrapper for 6c, stamps—free at office. Eleven rooms and parlors, so arranged that patients need not see each other.

Free Museum of Anatomy for Men.

Office Hours: 8 a. m. to 8 p. m. Sundays 10 to 12. separator by the use of which you can make better butter and more of it, but are also obtaining for the users of their separators the highest New York, Chicago and Kansas City market price for their butter. And still more. They are establishing all over the country what is known as the "Smith Churn Station Plan," which secures to the patron the highest market prices, and yet there is no churning to do. You simply have the milk and cream to care for. Nothing else whatever. See their quarter page advertisement this week explaining the plan, and write them for further particulars, if interested, mentioning the Kansas Farmer when doing so.

Farmer and Capital, \$1.25.

The Semi-weekly Capital, published twice a week at Topeka, Kansas, is an excellent 8-page Republican newspaper. It is issued Tuesday and Friday of each week and contains all the news of Kansas and the world up to the hour of going to press. To a farmer who cannot get his mail every day it is as good as a daily and much cheaper. By a special arrangement we are enabled to send the Kansas Farmer and Semi-weekly Capital both one year for \$1.25. This is one of our best combination offers and you can't afford to miss it. Address: THE KANSAS FARMER CO., TOPEKA, KANSAS.

Advertisement for Headache Pain Pills, featuring an image of a pill bottle and text: 'HEADACHE DR. MILES' ANTI-PAIN PILLS. At all drug stores. 25 Doses 25c.'

FREE! FREE! FREE!

Township map of Minnesota showing all railroads, printed in three colors, size 21x28, sent free for the names of ten or more parties who want to buy farms. Don't fail to write for descriptive circular of FARMS AND WILD LANDS. FRANKLIN BENNER, 621 PHOENIX BLDG., MINNEAPOLIS, MINN

Large advertisement for THE SMITH CREAM SEPARATOR. Features two images of the separator and text: 'THE SMITH CREAM SEPARATOR. DOES NOT MIX MILK AND WATER. THE SMITH CHURN STATION PLAN. The Smith Cream Separator Co. is building all over the country what is known as the "SMITH PLAN OF CHURN STATIONS." The advantages of this system over the present skimming station or creamery are as follows: The Creamery costs from \$3,500 to \$5,000, while the SMITH CHURN STATION, the most modern, and with the latest improved machinery costs but \$1,500; thus by the "Smith Plan" a saving of \$2,000 to \$3,500 is made in the cost of the plant, besides saving \$2,500 annually in expenses. The "Smith Plan" is as follows: The plant is built by the farmers of a neighborhood and the Smith Company, as a mutual association; the Smith Company retains \$100 worth of stock in each plant built; the Smith Company assists in the management and helps the secretary and the management in marketing the product; and also sees to it that the enterprise is a success. The farmer stockholders elect the officers, yet the Smith Company assists this board because each is mutually interested. Each farmer separates his own milk at home, feeds or uses the skimmed milk while fresh and sweet; and instead of costing 12 1/2 to 15 cents per hundred pounds to haul it to the creamery and have the skimmed milk returned not fit to use or feed, it will cost but about two cents to move the cream from 100 pounds of milk, saving the increased amount and quality of product, and a higher market value when sold. Stop a moment, brother farmer, and figure. Why give all your labor and profit to some middle point? Why not save it all? Run your own churn station, and get the New York, Chicago, or Kansas City market prices and keep your own earnings. You can do it. Other are making a fine thing of it. Why not you? You can build a churn station in your neighborhood, and will be surprised by the profits realized on your butter. Our churn stations are wholly of the farmers, for the farmers, and by the farmers!

AGENTS WANTED IN EVERY COUNTY IN THE UNITED STATES. For full information, address THE SMITH CREAM SEPARATOR CO. 113 WEST LOCUST STREET, DES MOINES, IOWA.

The Poultry Yard

Poultry Experience.

A START IN THE BUSINESS.

Ten years ago we made our first step into poultrydom. We purchased what we thought to be pure-bred, single comb Brown Leghorns, at seven dollars per half dozen for a breeding pen. Oh, what glorious anticipations! Our fortune would soon be made and it would be so easy! We expected the orders for eggs to roll in so fast that we could not supply the demand. Well, we didn't have an order and were glad of it, as our own chicks were hatching out and proved to be "dunghills." Some had single and some rose combs and were of many colors not known to this breed. One season was enough for us with unreliable stock. The next time we bought from reliable parties, paying fair prices for guaranteed stock of Derbyshire Red Caps, Light Brahmans, Plymouth Rocks, and Black Minorcas. We bought one 200-egg and one 100-egg size incubator and with eight poultry houses, cheaply constructed, but snug and warm, and with four brooders, we felt that we were well equipped to raise poultry.

WINTER EGGS.

We raise on an average five hundred head of poultry. What we do not sell as breeders we put in the best possible condition, kill, dress, and ship to market. Situated as we are, in a farming district four miles from railroad, and with no near-by city markets, we find the production of winter eggs gives us the most profit. And I will say to D. W. S. that if he wishes for a supply of winter eggs he must conform to nature as nearly as possible. In the spring and summer the hens are warm and can secure a goodly portion of their own feed (unless yarded fowls) such as grass, bugs, worms, etc., but in winter these dainties can not be secured, so we must feed something in place of them, green food such as cabbage, turnips, beets, celery, scraps, and table refuse. We feed a warm mash in the mornings, consisting of meat, meal, cut clover, bran and chop, with salt enough to make it palatable as for human food. At noon give wheat and oats in the litter of the scratching sheds. At night give whole corn, and keep them liberally supplied with oyster shells and pure water before them all the time. Water is best kept in drinking fountains, as the hens can not get in with their feet, neither can they scratch litter into the water. If such care is given along with good warm houses I think D. W. S. will get eggs.

USE OF INCUBATORS.

Now that the hatching season is again at hand, I wish to give our experience with artificial hatching and rearing of chicks, for the benefit of the amateur and those who are almost wrecked on the rocks of discouragement. In hatching we have had many ups and downs. Sometimes we would get 130 to 140 chicks from 200 eggs, then again we would get from 50 to 75 chicks from 200 eggs. As we were new at the business of raising chicks by artificial means, we lost a great many chicks by not keeping the brooders warm enough. The chicks would pack and huddle and many would smother. When we had gone to that high-priced yet most valuable teacher (experience) then and then only did we begin to learn the lesson that we must depend on ourselves and not altogether on the advice of others. We now use no moisture in hatchers and keep the brooder tanks about as hot as we can bear our hand on. The little chicks never pack now but will sleep snug and warm outside the hover.

HOW TO TREAT LITTLE CHICKS.

Treat little chicks as carefully as a new-born babe. Chilling is fatal. Great care should be taken in regard to feed for the first few weeks. I turn sick even to this day when I think of the poor little downy, helpless chicks that I have killed by my injudicious handling and feeding. I used to feed corn-meal dough, and this feed was sometimes left to sour. Again experience taught me that variety was the spice of life for chicks as well as for ourselves. The first feed should be dry bread or cracker crumbs. Give them a dish of cracked wheat and fine oyster shells. Put water where they can get at it but not into it.

COMBINING FRUIT-GROWING AND POULTRY-RAISING.

We are combining fruit-growing with poultry-raising. Our poultry yards are occupied by prune trees of the German variety. The fowls soon learn to hunt for the curculio, and the trees make abundant shade during the heat of summer. Digging around the trees

will cause the hens to stay under the trees to enjoy their dust bath and they pick up many insects that might prove injurious. We have some 300 trees of this valuable variety that will occupy a hillside near the house. This orchard will be occupied by poultry the year round. Quite a number of these trees are at a productive age, while quite a number are in the home nursery ready for spring transplanting. These prunes command a very fancy price and sell rapidly. As our expense to obtain this fruit is small the returns will be clear gain. We will increase the supply of fruit and poultry as fast as we can see our way clear to do so profitably.—Mrs. S. W. Burlington, Noble County, Ohio, in National Stockman and Farmer.

Raising and Managing Chicks.

At the March monthly meeting of the Winnipeg Poultry Association, Thos. Reid gave the following paper on the above topic:

I think it would not be out of place for me to say a few words about the hatching of chickens first. In the first place you want to get your hens in good condition for laying. In my opinion most of the poultry breeders get their hens too fat in the winter, through feeding them up for the shows. A fat hen will not lay. If she does lay, I claim that the eggs will not hatch well, and those that do hatch will be weak and not half of them will live, even with the best of care. Look at any of the stock-breeders, they do not feed up their horses, cattle, or pigs to get them fat to breed from. In fact, that is one of the things they guard against. They have them in good condition and that is the way you should have your hens to get fertile eggs, good hatches, and strong chicks.

If you use hens for hatching you must dust them well with insect powder to get them free from lice. I myself prefer incubators to hens, as it is no more trouble to look after an incubator with a hundred eggs than it is to look after one hen. If you use an incubator, get it warmed up and run it a few days before you put the eggs in so as to get it regulated right; then when you have it running right put in the eggs and keep it at the right temperature. Then if your eggs are good, the incubator will do the rest. You need not be in a hurry to take the chickens out of the incubator; leave them till they are well dried, as they do not need any feed from ten to twenty-four hours after they are hatched. Now have the brooder all ready to put them in as soon as you take them from the incubator, put some chaff on the floor for them to scratch in. If I do not have the chaff, I use bran. In fact, I prefer bran, for if they pick up some, it will not hurt them.

For feed for the first few days I would recommend stale bread, soaked in milk or water, squeezed dry, and if you have eggs to spare, boil the eggs hard and mix with the bread crumbs. A good feed for young chicks is a cake made of equal parts of shorts, fine corn-meal, oatmeal, and a little lean meat, chopped fine, with a little salt and baking soda added. Cook this in a pan in the oven. I would not feed much green stuff until the chicks are a week or two old. When they are about a week old you can start and feed fine wheat, coarse oatmeal, chopped cooked meat, scraps from the table, pot barley, rice, and millet seed. I would not feed too much meat at first; the main thing is to keep them warm. I think a good many of the chicks die from not being kept warm enough for the first two or three weeks. Cold and too much soft feed is the cause of so much bowel disease.

Get your chickens out early and be careful how you feed them and keep them clean. Do not forget to give them grit of some kind, as they need it as well as the old fowls. When I say to get your chicks out early I mean about April and the first two weeks in May. [These dates are early in Manitoba. Not so in Kansas.] I always find that early chicks do the best; they are more free from disease and lice. You all know that more children die in the warm months of summer than at any other time of the year, and so I think it is the same with chicks. That is why I advise you to get them out early.

Practical Points.

One trouble with many who start in the poultry business is that they do not hold out long enough. They commence with giving good care and feeding well, often going to an extreme along this line, but they gradually become more careless and in a short time are back in the old ruts again, and this means ultimate failure.

Young chickens and especially those that are being crowded by liberal feed

are liable to indigestion. A good remedy is to catch the chicken, squeeze the crop gently to loosen or unpack the food in it. Open the mouth and pour in all the water that will run down the throat. In a majority of cases one dose is sufficient, but in severe cases it may be necessary to follow up the treatment two or three days.

It is quite an item, especially with the early hatches, to encourage the hen to stay with the chicks as long as possible. Unless kept in a brooder from the start, they will keep warmer and drier with less trouble with the hen than if weaned. When she leaves them they should have a warm, dry place provided for them. They should not be allowed to go to the roosts too early, as this in many cases causes crooked breasts and backs.

Eldon, Mo. N. J. SHEPHERD.

Prickly Ash Bitters cures diseases of the kidneys, cleanses and strengthens the liver, stomach and bowels.

Send at once for agents' terms and sample copies.

POULTRY BREEDERS' DIRECTORY.

BLACK • LANGSHANS.

Eggs from 8 yards of very fine fowls. A few choice cockerels. Circular with prices free. J. C. WITHAM, - - Cherryvale, Kansas.

LIGHT BRAHMAS—Forty cockerels \$1 each; 10 cockerels, very choice, \$2 each; 30 hens and pullets \$1 each. Eggs in season. Address F. W. DIXON, Holton, Kansas.

LIGHT BRAHMAS—To make room I must sell 50 Light Brahma cockerels, from high-scoring eggs; some fine ones; all go for \$1 each. Eggs, first pen—\$0 for \$3; second—\$0 for \$1.50; third—\$0 for \$1. Mrs. John R. Kenworthy, Wichita, Kans.

EGGS FOR HATCHING—White Holland turkeys, Barred Plymouth Rocks, Rose Comb White Leghorns, Single Comb Brown Leghorns, Black Langshans, Golden Seabright Bantams, Improved Pekin ducks. Write me for prices. J. C. Curran, Curran, Kans.

LIGHT BRAHMA COCKERELS—\$1 each; 3 for \$2.50; young hens \$1 each; 6 for \$5; 100 eggs \$3; 45, \$2; 30, \$1.50; 15, \$1. Mrs. N. Van Buskirk, Blue Mound, Kans.

FOR SALE—One 96 point yearling tom turkey. Price \$3.50. B. L. Pitzer, Sawyer, Kans.

SILVER LACED WYANDOTTE eggs from standard-bred, farm-raised birds, 65 cents per 14. Mrs. M. A. Hall, New Salem, Kans.

POULTRY—Don't order, but write. I have pure bred, from laying strains. It pays to have hens that lay, and that is what I can boast of. Write C. L. Hollingsworth, Coffeyville, Kans.

WHITE WYANDOTTES—I have selected from my best bred poultry a pen of the finest; I will sell eggs from these at \$1 for 15. Write for prices of birds. B. L. Grover, Burrton, Kans.

Barred Plymouth Rocks, and White Wyandottes—Eggs \$1 for 15; \$1.75 for 30. J. A. Sawhill, Edgerton, Kans.

EGGS FOR HATCHING—From Barred Plymouth Rocks, of superior quality. 15 eggs, \$1; 30, \$1.50; 60, \$2. E. J. Evans, Box 21, Fort Scott, Kans.

High-scoring, prize-winning, Cornish Indian games, W. P. Rocks, Black Langshans. Eggs \$1 per 15. Mrs. J. C. Strong, Moran, Kans.

FOR SALE—S. C. B. Leghorn, C. I. Game, W. Wyandotte and W. Plymouth Rock. H. O. Staley, Rose Hill, Butler Co., Kans.

BLACK MINORCAS—Biggest layers of biggest eggs. Pairs, trios, and breeding pens for sale cheap; 50 cockerels from \$1.25 up; eggs for hatching \$1.50 per 15. Also American Dominiques, Houdans, White Crested Black Polish, White Crested White Polish, and Buff Laced Polish; eggs same price. Fair hatch guaranteed. James C. Jones, Leavenworth, Kans.

GEM POULTRY FARM—C. W. Peckham, Proprietor, Haven, Kans. Buff Plymouth Rocks, 2 flocks. Eggs from best flock \$2 per 15. A few choice Burdick cockerels for sale. Pea Comb W. Plymouth Rocks, 2 flocks. Eggs from best flock \$3 per 15. A few choice cockerels for sale. M. B. turkeys, 2 grand flocks. Eggs \$2 per 11. Young toms for sale.

BARRED PLYMOUTH ROCKS—Eggs from prize-winners \$1.50 per 15, of large stock. Write me your wants and I will try to please you. Satisfaction guaranteed. L. L. De Young, Box B 246, Sheldon, Iowa.

40 BRONZE TURKEYS sired by a 40-pound tom. Two separate pens. Write for prices. Eggs for sale. Address Mrs. Fred Cowley, Columbus, Kans.

Barred Plymouth Rocks, and Single Comb Brown Leghorns. Pure Montauk and Wm. Ellery Bright strains. I have good birds and will sell eggs. S. P. Reynolds, Dodge City, Kans.

B. P. ROCKS, SCOTCH COLLIE DOGS, AND BELGIAN HARES—Six grand matings of B. P. Rocks as good as the best. Twelve year's experience with this breed. Eggs from selected pens, \$2 per 15; \$3.50 per 30. Special prices on incubator lots. Satisfaction guaranteed. W. B. Williams, Box 143, Stelia, Neb.

ROSE COMB BROWN LEGHORNS—Exclusively Farm-raised eggs per sitting of 15. \$1. Incubator users write for special prices by case or 100 lots. P. H. Mahon, Hollis, Cloud Co., Kans.

Ten M. B. turkey toms, and a few hens; 4 Barred Plymouth Rock cockerels. Barred Rock, and M. B. turkey eggs from prize-winning stock. M. S. Kohl, Furley, Kans.

EGGS—\$1 for 15, from Barred Rocks; fine fowls; Shoemaker and Hawkins strain. Mrs. T. Bowen, Garnett, Kans.

POULTRY.

LIGHT BRAHMAS—Exclusively. Eggs—pen, \$1.50 per 15; \$2.50 per 25; farm flock—\$1 per 15; \$1.50 per 25. Mrs. E. W. Gowdy, Garnett, Kans.

PEKIN DUCK EGGS—(Rankin strain) \$1.25 per 15. Also a few drakes for sale. E. W. Adams, Berryton, Kans.

HIGH CLASS POULTRY—White and Silver Wyandottes, and W. P. Rocks. We will continue to book egg orders—15 for \$1. E. F. Meek, Hutchinson, Kans.

EGGS FOR HATCHING—Single Comb White Leghorns; Wyckoff and Knapp Bros. strains. Price \$1 per sitting of 15 eggs, or \$1.75 for 2 sittings, if ordered at one time. Address Wm. Whitby, Goddard, Kans.

50 WHITE WYANDOTTE COCKERELS FOR SALE CHEAP.

Send postal card for circular.

WHITE 'DOTTE POULTRY FARM, Wetmore, Kansas

EGGS ...FOR... HATCHING

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

13 for \$1; 30 for \$2; 50 for \$3; \$5 per 100. Receipts for making and using Liquid Lice Killer, 25 cents. Write for descriptive circular.

T. E. LEFTWICH, Larned, Kansas.

EGGS AND STOCK


Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Buff Cochins, Light Brahmans, 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.


WEALTH FOR YOU with incubators 6 months Free Trial. ONE INCUBATOR FREE to good agents. Half price to introduce them in your neighborhood. Catalogue free. National Incubator Co., Dept. DP, Chicago



VICTOR INCUBATORS
Hatch every fertile egg. Simplest, most durable, cheapest first-class hatcher. Money back if not positively as represented. Circular free; catalogue 6c. GEO. BRETEL CO., Quincy, Ill.



SHOEMAKER'S POULTRY BOOK
and Almanac for 1901. 160 pages, over 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. How to raise chickens successfully, their care, diseases and remedies. Diagrams with full descriptions of Poultry houses. All about Incubators, Brooders and thoroughbred fowls, with lowest prices. Price only 15 cents. C. G. SHOEMAKER, Box 120, Freeport, Ill.




20th CENTURY POULTRY
Catalogue. An interesting and instructive book on successful poultry raising. A 2c stamp gets it. FINE EGGS FOR HATCHING A SPECIALTY. Fertile and true to name. THE H. M. JONES CO. Graceland Farm, Box 51 N Des Moines, Iowa.



200-Egg Incubator for \$12.00
Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day. GEO. H. STAHL, Quincy, Ill.



INCUBATORS
and BROODERS for Chickens, Ducks & Turkeys. Will hatch anything that a hen can. Write for Free Catalogue. BURR INCUBATOR CO. OMAHA, NEB.



HOLLYHOCK POULTRY FARM
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 throughout Iowa and quotes extremely low prices. Send 4c in stamps for postage. Hollyhock Poultry Farm, Box 1429, Des Moines, Ia.

BELGIAN HARES.

BELGIAN HARES—Special low price for next 90 days. D. A. Wise, Topeka, Kans.



INVESTIGATE BEFORE YOU BUY.
We want our customers to be perfectly satisfied before they spend their money. Investigate the claims of all incubators and then decide. We believe you will find that the **SURE HATCH INCUBATORS** AND COMMON SENSE FOLDING BROODERS are giving better satisfaction than any other made. It's because they are so simple, sensible and sure. They are built for busy people, who haven't time to fuss and bother. Our catalogue is FREE. We don't ask you to pay for it. Isn't it worth examining?
SURE HATCH INCUBATOR COMPANY, CLAY CENTER, NEBRASKA.

In the Dairy.

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

Young Men Who Want to Milk.

At the agricultural college the position of milker is in demand by our students, not so much for the money they can get out of it, as for the skill and knowledge gained by keeping records in connection with actual experience. All our boys are trying to make records with their cows, and of course are very careful to milk them clean. They compete with each other to see who can get the most milk and at times they get so interested in special cows that they can hardly wait until they are through milking in order to weigh the amount, and it is amusing to watch the pleased expressions when a high yielding cow goes up a few tenths of a pound in her yield or her test. It is such intelligent interest as this that makes the milking hour a pleasure and not a time to be dreaded and scorned, as is too frequently the case. As to the time it takes to weigh or sample the milk of individual cows, an actual test made at the agricultural college shows that with 23 cows it took 8 minutes and 23 seconds to weigh, record and sample, or an average of 23 seconds per cow—less than a half minute. To weigh and record (not sample), it took about 10 seconds per cow.

D. H. O.

A Valuable and Well Kept Dairy Record.

E. C. Cowles & Sons of Sibley, Kans., send the record of their 10 best and 10 poorest cows in their herd for the year 1900.

BEST TEN COWS.						
No.	Lbs.	Milk Test.	Lbs. B. Fat.	Receipts.	Cost.	Profit.
22.....	6,720	5.3	359	\$65.50	\$26.30	\$39.20
9.....	5,273	4.3	358	65.30	26.80	38.50
2.....	5,710	4.	352	65.00	27.00	38.00
6.....	7,990	4.	320	59.00	25.00	34.00
5.....	7,482	4.1	310	57.00	25.00	32.00
11.....	7,761	3.9	300	55.85	25.85	29.99
10.....	6,850	4.	282	52.60	25.00	27.60
16.....	5,694	4.7	270	50.20	25.40	24.80
1.....	5,793	4.5	262	49.00	25.50	23.50
3.....	7,475	3.4	251	47.30	26.50	20.80
Total	72,784		3,064	\$566.75	\$261.85	\$304.90
Average	7,278	4.2	306	56.67	26.18	30.49
POOREST TEN COWS.						
No.	Lbs.	Milk Test.	Lbs. B. Fat.	Receipts.	Cost.	Profit.
19.....	2,965	4.4	132	\$23.20	\$24.50	\$ 1.30
17.....	4,400	4.5	199	36.30	25.85	10.45
8.....	5,153	3.7	190	35.50	25.00	10.50
18.....	4,927	4.4	220	40.00	26.00	14.00
7.....	6,206	3.4	212	40.00	25.00	15.00
20.....	5,245	4.1	215	40.35	25.25	15.10
4.....	4,800	4.5	218	37.80	22.50	15.30
14.....	4,613	4.8	220	40.30	25.00	15.30
13.....	5,130	4.7	241	42.30	25.00	17.30
23.....	4,981	4.9	245	44.75	25.00	19.75
Total	48,625		2,092	\$380.40	\$249.10	\$131.30
Average	4,862	4.3	209	38.04	24.91	13.13

In commenting on the record, Mr. Cowles says: These cows were all cared for alike except a little difference in quantity of feed. The most of them were dry about six weeks in July, August, and September. The record shows there is a difference in cows.

If the 10 poorest had averaged with the 10 best, there would have been an added profit of \$170. This account does not include the value of skim-milk, which is worth 20 cents per 100 pounds, neither the value of the calves.

Testimony Concerning Farm Separators.

Comparatively few creameries in Kansas are operated on the farm separator plan, but there are some who have made a success of the enterprise. The butter-maker of the Dunlap Creamery Company writes as follows: "I have not had so very much experience in regard to this farm separator business, although I handled quite a number of pounds of separator cream the past year, and had good luck with it. I could not make as good butter as I could from my own separator cream. I will give you a few reasons why. First, because the farmers do not take good care in keeping the cream cool. Second, it is too long on the road, and coming in only every other day, arrives sour and partially churned. I had some cream this summer that taxed all my skill and experience in order to make first-class butter. My farmers take good care of their separators, for I go out and see my patrons and instruct them in regard to handling machines. I also give them pointers on how to cool and keep cream in good shape. On the other hand, there are some good points. First, hauling the cream is cheaper than hauling the milk with no skim-milk to bring back. I am certain that the skim-milk from the hand separator is of more value than that from the creamery. For my part, I would be in favor of having the sweet milk brought to the factory instead of the cream, but I believe we are coming

to the time where the hand separator system will supplant the power separator. I think that I will receive far more cream in the next year than milk."

MERITS OF HAND SEPARATOR SYSTEM.

The secretary and manager of the Fulton Creamery Company writes a very enthusiastic letter, as follows: "There is, in my opinion, everything in the merits of the hand separator system, but we have to think hard a long time to study up any serious objection to the plan. We adopted this system about a year ago, with fear and trembling, not because we wanted to, but because we got to a point where we had to make a change of some kind. Our patrons were getting tired of having their milk hauled or hauling it themselves, our haulers were quitting because they could not get milk enough to justify them in hauling, and the skim-milk sterilized the best we could, made a very poor calf feed in the opinion of most of our patrons, and they were feeding a great deal of whole milk to calves. We failed in persuading any great number of our patrons to try to raise calves with creamery skim-milk.

RAPIDITY OF CHANGE.

"The hand separator has removed all these difficulties—in fact, has been our salvation. The rapidity with which we made the change from the whole milk to the hand separator system was startling even to ourselves. Seven months from the time we put out the first hand separator, we closed down our factory separator in the main plant and two of our skimming-stations, and made double the amount of butter that we made the same time in the year previous. To-day we are operating no power machines at all, and the skimming is all being done on the farms

with 65 hand separators, and all our patrons are pleased and happy and are buying all the cows they can get. They think they have found a "bonanza" in the dairy business.

MACHINES HIGHLY PRIZED.

"We were afraid when we put the separators out, that our farmers would afterwards regret investing so much money in them, but on the contrary, we haven't a single patron of whom you could buy his separator at three times its cost if he could not replace it with another one. Prizing their machines so highly the farmers have taken splendid care of their separators and with the exception of two or three cases of neglect, we have had no trouble on that score, and with once or twice showing, the average farmer is able to operate the machine satisfactorily.

"Our company pays the farmer a net price for cream right at his door, and hires its own hauler, thus relieving the farmer of all trouble and anxiety about getting his product to the creamery. In hot weather we gather the cream every other day, and in cold weather twice a week. The cream is weighed and sampled right before the patron's eyes and paid for by the Babcock test, using an eighteen c. c. pipette. The patron is given a ticket punched with his number, date, and number of pounds of cream he has each time, and a duplicate is taken in to the creamery by the hauler.

"These checks are divided by a perforated line at the top, and fold together, so that the patron's number, date, and the pounds of cream are punched in both at the same time.

"The hauler coming in contact with the patron every time he gets cream can instruct him in the care of it, much better than when milk is delivered to the factory; the hauler sees how the patron cares for the cream and if it is not right, corrects it. We are satisfied that we get a better article of butter from cream gathered every two days than from milk delivered from the

FAKE TESTS AND TESTIMONIALS ABOUT CREAM SEPARATORS

There are always new people to be gulled with an old fake. Hence a word of caution is pertinent regarding the reputed separator "test" and "testimonial" advertisements now being published in some of the papers and put out in circulars.

As regularly as the malarial and sarsaparilla season comes round the would-be competitors of the De Laval machine like to flatter themselves by seeming to stand up alongside the De Laval machines and publish reports of their imaginary nearness in efficiency,—according to means and measurements of their own creation and without much regard for truth and honesty.

Many of these so-called "tests" are simply manufactured out of whole cloth,—it being impossible to locate the places where made or the persons by whom made. Others of them are made by agents or employees or by intending buyers who are offered a big discount and an agency provided they will "try" a De Laval machine in apparent test, the conditions of which "test" are to be fixed by the concern in question and the "results" then certified to by the purchaser. Sometimes innocent parties are called in as "judges," to certify to skim-milk "tests," when they know no more of the manipulative use of a Babcock Tester than they do of a flying machine. Occasionally tests may be honest in a way but so conducted as to be altogether impractical and misleading in results shown.

All this applies equally to testimonials, though some of these are given in good faith—just as is the case with "dilution" separators and every other fake and nostrum ever perpetrated.

There isn't a man living sufficiently familiar with cream separators to pass competent judgment upon them who does not know that the patent protected "Alpha" disc system employed in the De Laval machines renders them unapproachable by anything else yet devised,—a fact to which thousands upon thousands of De Laval users may bear witness with their experience.

THE DE LAVAL SEPARATOR CO

Randolph & Canal Sts.,
CHICAGO.
103 & 105 Mission St.,
SAN FRANCISCO.

GENERAL OFFICES:
74 CORTLANDT ST.,
NEW YORK.

327 Commissioners St.,
MONTREAL.
248 McDermot Ave.,
WINNIPEG.

factory daily. The milk being separated while warm from the cow, all impurities are taken out, and the patron has only a few pounds of cream to care for, which in hot weather is usually hung in the well. He has warm skim-milk to feed his calves and pigs and has it just the same every feed. He saves every drop of milk and runs it through his separator. Sunday as other days, and loses nothing by milk souring, which was a big item the old way. A majority of the patrons even find the skim-milk good enough for household purposes, by so doing making another saving.

VALUE TO CREAMERY MAN.

"In our opinion the system is not only better for the patron, but also better for the creamery man, for the expense of maintaining and operating power separators is no small item, and although we have less patrons, we have

increased our output 50 per cent, making through the summer over 13,000 pounds per month. We had paid the past year for November, 1899, 20 cents, December 20 cents, January 1900, 20 cents, February 18 cents, March 17 cents, April 14 cents, May 15 cents, June 15 cents, July 15 cents, August 15 cents, September 16 cents, October 17 cents, for butter-fat at the farmers' door, net—the creamery company hiring all haulers. We find that one team will gather the cream from as many patrons as four or five teams could haul milk for, going every other day.

"One team takes two routes in summer, and three in winter, the cream is gathered in Haney cream-carriers and in summer about 20 pounds of ice is put into each 30-gallon can every morning when the hauler starts out. We find in hot weather the cream keeps by having the farmers set their machines to skim cream that will test about 35

per cent, in cold weather 28 to 30 per cent.

In getting a fair test of the cream we found our only difficulty with the system, and this we have overcome with a little experience, and it is now being done to the satisfaction of all.

ADVANTAGES.

"Summing up the advantages of the system, we have: First, saved expense and trouble of hauling or having hauled a lot of milk to the factory and back again, which at 10 cents per 100 pounds amounts to 2½ cents per pound of butter-fat on 4 per cent milk. Second, having the warm, sweet milk right from the cow in ten to fifteen minutes after milking, and just the same every time, its feeding value, based on estimates of our patrons, is increased 50 per cent over the old way of sterilized milk from the creamery. Third, the farmer, instead of having 200 or 300 pounds of milk and skim-milk to care for, has only 20 or 30 pounds of cream, which is a great saving of labor, even taking into consideration the labor of separating it by hand. Fourth, the farmer is never under the necessity of feeding or using whole milk for calves or household purposes, thereby losing the cream.

OBJECTIONS.

"High price of the machine is all we hear, and to offset this the farmers say that with 10 cows they more than save the price of the machine every year, over and above the old way. All the above are actual statements made by farmers who have had separators six months or over and estimates based on their actual experience. Furthermore, the writer himself is milking 12 cows and has a hand separator. In our opinion a system that has so much merit is bound to win, wherever tried."

Pleased With His Guernseys.

Mr. F. L. Whitaker of Shawnee County writes the following in regard to his Guernsey cattle:

I have a bull that was shipped from Wellington, Ohio, last August.

He is 6 years old, weighs about 1,500 or 1,600 pounds. Five of his calves gave over 4 gallons of milk the first time they were fresh. He is quiet, kind, and gentle, and I am very much pleased with him. My full blooded Guernsey cow made 15 pounds of butter in a week, hand skimmed. I think the Guernseys are all right for butter; my 3 cows made 1,135 pounds of butter in the year 1900, and I sold between \$10 and \$11 worth of milk. The cows were very a little more than fifty days each. I had no separator. I think they did very well. About a month ago I bought a separator, and I find that it takes about 2 quarts less milk to make a pound of butter. So this year I am going to make lots more butter.

I am feeding my cows about 3 pounds of bran, 3 pounds corn chop, and 1 pound oil-meal, night and morning; prairie hay at night and alfalfa in the morning, all they will eat up clean. I had 3 acres of alfalfa and cut it five times last summer. On May 24, I got 3 loads, June 27, 4 loads, July 17, 2 loads, August 28, 2 loads, and October 8, 1 load.

Kansas Farmer's Handy Guide

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

CANT-HOOKS.

Cant-Hook for Handling Stone.

With such a cant-hook one man can handle a stone that two men could not handle without it. The hook should have holes punched through it so as to adjust the hook to any sized stone. The hook is to run through the handle and to be fastened with an iron pin with a ring in it. This will be found to be a very serviceable implement. Any blacksmith can make it.

Horse Cant-Hook for Pulling Stumps and Turning Rocks.—Take post 8 feet long, hew to 7 inches at butt; taper to 3 inches at top. Mortise plank in butt; plank to be 3 feet long, 7 inches wide. Fasten with 3 bolts, now 3 feet from butt insert a staple with strong hook; 8 inches above this place one more staple, letting them run through post with bolt and washer; then take 1½ inch iron, 2 feet long, bend hook on one end, add 4 links to the other end to hook in staple in post; stand post on big end, hitch team at top and you are ready.

Handy Cant-Hook.—Good for clearing timber off the land, rolling logs on heaps, snatching out roots after they are cut through once. Make it in regular cant-hook style, then set it, point

down on a board, and if the point will shave the board, not rake it, it is properly made.

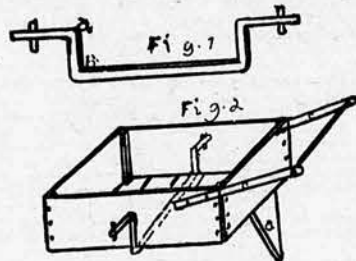
CARRIAGES.

Three in a Carriage.—When 3 persons are crowded riding in a carriage, roll up a horse blanket, and place in center of seat for the driver to sit on, thus raising him above the others.

Washing Wheels of Carriage or Buggy.—Take them off and wash in horse trough, where it can be easily and more satisfactorily done than otherwise. Stand suspend a light frame. Cover with muslin, letting the sides hang nearly to the floor. Have the back separate so that it can be thrown up to let the carriage in and out. When run into its place, pull down the curtain or back and the cover is on.

CARTS.

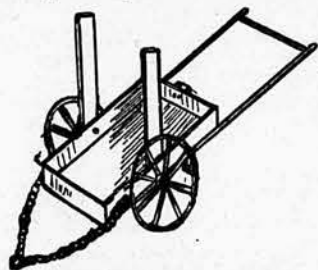
Cheap Hand Cart.—A good use for the old buggy. If you have an old buggy, take either the hind or front axle to the blacksmith and get it bent as shown in Fig. 1. From a to b is 8 inches, and from b to the opposite corner is 23 inches. The box is made of 1-inch poplar or pine boards, 10 inches



wide. The sides are 38 inches long and the box is just wide enough to fit into the axle. In Fig 2, c c a e pieces 1 by 3 and 32 inches long, bolted on the box as shown in illustration. The handle, which is fastened in these at the ends, is a round piece of wood 1½ inches thick, and d is made of iron and is bolted on the box for a rest while standing. Put on the wheels and you have a low-down cart, handy for one hundred and one different uses.

A Cheap Watering Cart.—Needed where irrigation is not practicable, but where trees must be watered the first and often the second year after setting, as in California, Colorado, and the West in general. A great many use a sled and barrel, but I have a cart that leaves a sled in the background. Take a piece of 3 by 4 dry hickory or oak for axle, make spindles 7 inches long and 2½ inches through, for wheels to turn on. Saw 2 wheels from a tree 14 inches in diameter; saw wheels so as to be 3 inches on the tread; a ¾ wooden lynch pin holds the wheels on. Make frame 6 feet long, out of 2 by 3 stuff; bolt all together, also to the axle. The 2 front cross-pieces must be on the under side of frame, to which bolt a short runner 2 by 8 inches. This is to level up the frame and to draw by. Adjust the barrel over the axle, and there will be but little weight on runner in front when cart is in motion. Three good points in its favor: It is low down and handy; it costs less than one dollar; 1 small horse can draw a 50-gallon barrel of water easier than 2 horses can on a sled. The water has a circular motion and will not slop over as on a sled. The sled has a jerky motion, and on this account you lose a large per cent of water in going some distance, while with the cart I describe above you can take a barrel level full to almost any part of the field. One other point in the cart's favor, you only need 1 horse, consequently you can take it where you can't take two.

A Handy Farm Cart.—Take a pair of old mowing machine wheels with the axle in. Take 4 scantlings, 2 by 4 inches and 10 feet long for side pieces. Cut the bottom boards the length of the axle between wheels. Lay 2 scantling down and nail boards on, leaving space for axle a little back of center. Lay it up and put axle in place, and



spike the other 2 scantling on; now spike 2 pieces of 2 by 4 on front end, about 20 inches long, on each side, and point or round them up like a sled runner, and bore holes for stakes and you can use either side up. Draw with a large clevis. The front end only rests

A Tobacco Man hung up a sign



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You can trust the quality of Wetmore's Best tobacco. Always the best and always the same. Its high quality will be maintained as long as a host of chewers appreciate a genuine chew at an honest price. No premiums are necessary with Wetmore's Best. It sells on its merit. Ask the dealer.

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

The largest independent factory in America.



on ground when horses stop. It is handy for hauling plows, harrows, rails, etc.

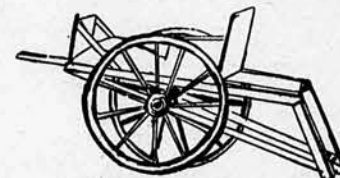
Handy Cart.—A cart good for hauling dirt, manure, etc., can be made by taking wheels and axle off old mower. Build stout box 5 feet long, fasten to axle by iron clips. Let shafts extend full length of box and attach them to outside of same, high enough to bring cart level when horse is hitched. Very handy in orchard or vineyard. This cart should be so built and loaded that but a small amount of weight would come on horses' back; also use a good large pad under the back strap.

Hand Cart.—Here it is; but its value you can not appreciate without having one of them. Good material is required in its construction. If you have no good carriage wheels of your own that are idle, inspect a carriage builder's stock of second hand wheels; select front wheels if possible. Get axle (iron one) to fit boxes in wheels, remove wood and clips from axle; find center of axle, and with a cold chisel cut deep enough in axle so it can be broken. Break, then lap broken ends so cart will be just the width desired, say 3 feet 4 inches from hub to hub. Unite them firmly with 2 clips, take 2 oak beams 2 by 3 inches and 6 feet long. Saw a notch ½ inch deep in each beam, to fit axle; just far enough from end, so that beam will extend back about 2 inches beyond wheels, fasten beams to axle with clips. Mortise 2 ½ by 1 inch holes in each beam, insert posts 1 foot high in mortise; fasten sides and ends to these with screws; the bottom boards are put on crosswise, and are screwed fast to beams. There is a "leg" fastened to front end of box, a trifle shorter than the wheels are high, so the box will lean a bit. The beams, which serve as handles, will do much to keep it from tilting then, and when moving, the leg will not strike the ground so easily. The same is well braced, 2 board strips 1 by 3 inches and 3 feet long are fastened to sides of box with bolt; they can thus be erected or laid prostrate as desired. The end board at back is so fixed that it can easily be removed. There is a strong chain with 2 large harness rings at ends modified somewhat so they can just be slipped over axle. A ring is in center of chain to hook singletree to when you have hauling that requires a horse. To us it is more serviceable than the wheelbarrow. We hauled stone, manure, wood, water with barrel to irrigate, etc., and do not see how we could get along without it. The load can be so built that you have barely anything to lift. The chain is not in the way if horse is not used, as it does not quite

strike the ground. To keep chain up at end of box, I used bolts with large head. To prevent slipping through link, bore hole through board at side at respective link; put bolt through link, and board and turn nut on inside. If head of bolt is too small, use washer.

A Convenient Cart.—Take wheels that lie around on most farms (from old cultivators). Make an axle of hardwood, the width that suits your fancy; put in tongue or pole with flat strips from near wheels to pole for box to rest on. Get a box at the store of convenient size to suit, say one to hold 2 bushels or more. The box can be nailed to axle and wired to pole nicely by making gimlet holes on either side of pole in front of box. Then the load can be dumped and box stay in place. Such a vehicle to run around the place is almost indispensable. I have one, and would not do without it for dollars, yet it need not cost 50 cents. An 8-penny nail will hold wheels in place.

Home-made Cart for Breaking Colts.—Make a pair of strong shafts about 2 feet behind the wheels. They are bolted upon the axle-tree, and underneath these is a lighter pair of poles attached to the shafts in front and bolted also



to the axle-tree by the clamps that are used to hold the shafts. By using a kicking strap on the colt, this arrangement will keep him from rearing, as the end pieces bear upon the ground. The box is made strong and a strong plank bolted to uprights in front, and the cross bars form the dash board. The back and seat are similarly attached.

Where can you invest money more profitably than by buying a bottle of Prickly Ash Bitters—you get four for one. A kidney medicine, a liver tonic, stomach strengthener and bowel cleanser. Four medicines for one dollar.

ORNAMENTAL FENCE



25 designs, all steel. Handsome, durable. —Cheaper than a wood fence. Special inducements to church and cemeteries. Catalogue free. KOKOMO FENCE MACHINE CO., 622 North St., Kokomo, Indiana.

Grange Department.

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

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

National Grange.

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

Kansas State Grange.

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

Senators by Direct Vote of the People.

And now Wisconsin through its legislature, petitions congress to submit to the several states, a constitutional amendment, providing for the election of senators by direct vote of the people. The deadlocks, in several legislatures this season, resulting in having one state without any representative in the senate for the next congress, and another with only one senator and he an accidental holdover, also are attracting the attention of the legislators from necessary legislative work and are rendering the people still more determined to secure a change in the mode of electing United States senators.

This is a contest of the people without regard to party against the politicians of all parties, with the politicians in power and on the defensive. This proposition has been sent like a foothold back and forth between the two houses of congress for several sessions always passing one house by a strong vote to be killed by strategy and not by vote in the other house.

No member of congress wants to go on record by an aye and nay vote against the proposed amendment.

Is it not about time to remind congress that there is another way of securing an amendment to the constitution, through which it will be compelled by its official oath to comply with the demands of the people? Let the legislatures of the several states ask congress for a constitutional convention to propose an amendment to the constitution, and long before the necessary two-thirds of the states had filed their requests, both houses of congress would find time during the term of one congress to vote upon the question, vox populi, vox Dei and it will prevail.

Manhattan, Kans. E. W. W.

A Good Word from Pennsylvania.

Editors Bulletin:—I am more and more pleased with the Bulletin every time I receive it. I know of no other paper in the United States so true to grange interests and principles, and true to grange principles means true to the agricultural interests of our country in every particular.

I know there are many of the agricultural papers advocating the grange cause and some of them, no doubt, with a sincere purpose. I also know of several papers claiming to be grange papers, and, in a measure some of them are, while others are only advocating for the sake of grange support.

Most grange papers are more or less local in their character, while the Bulletin is national in all that pertains to grange work. It enters no sectional strife, knows no sectional interests; always endeavoring to treat every true patron with both charity and fidelity. Pursuing such a course I do not wonder it enters so many grange homes in so many states; I only wonder that it is not found in every grange home in every state.

TO MY BROTHER PATRONS.

Bro. Patrons:—Have you ever thought of the good work the Bulletin has been and is now doing for the Grange? Have you ever considered the amount of care and hard work required to edit and publish a paper that shall be always true to the best interests of our "Order"? If you have, well and good, if not, it is time you should give attention now.

For nearly a third of a century, the American Grange Bulletin has been going out among the farmers of this country striving to arouse them to a new life and a new sense of duty. Every week during all these thirty years, it has been trying to impress upon them the necessity of organization for their mutual advancement and protection.

It began in a small way, but through hard work and continued efforts it has grown to be a power for good in our cause; and above all, through all these years it has always been true, always faithful and has never faltered.

Patrons, for this fidelity to our cause, we owe to the Bulletin our best ef-

forts towards an increased subscription list. There are none of us so deficient in talent but we could add at least one new subscriber to the list. Let each one of us do this one little favor for the Bulletin this week.—L. A. Tucker, in Grange Bulletin.

They are of the Best Quality.

Commenting on the recent session of the State Grange of Maine, the Lewiston Journal said:

"It speaks pretty well for the state grange that nearly 3,000 of its patrons can invade the two cities, remain four days and not one of them get into some sort of trouble. For if one has, nobody has heard of it. Usually the police are a bit more active on occasions like this, but the annual meeting of 1900 is an exception. This big body of visitors practically owning the city, appear to have gotten along beautifully."

To which the Maine Farmer very properly and pointedly replies:

"Our esteemed contemporary seems surprised that the patrons of Maine should visit Lewiston and remain four days without getting into some sort of trouble. Either the writer of this squib was just getting out of the daze of a three weeks' booze or he had a very crude idea of the quality of men and women from the farm homes of Maine. This class of people is not the kind which gets into trouble. The cities have repeated reason to be grateful that behind the throne can be found the great army of thoughtful, industrious, sober-minded, country citizens, a bulwark against the incoming tide of evil and a tower of strength in self-control."—Grange Bulletin.

What is the Grange?

The grange is a child of necessity and was born of the peculiar environments of the farmers' isolated condition.

The grange is a fraternal society of men and women engaged in agricultural pursuits, to elevate their calling, brighten their intellects, beautify their homes, enhance their profits, and guard their interests.

It follows, therefore, that each member owes certain duties to his society and vice versa, that the society owes certain duties to the individual member.

A clear conception of these reciprocal duties is the foundation of permanent grange growth.

Membership in the grange does not require the sacrifice of personal liberty; its mission is to protect, not to interfere with it.

Every person fourteen years of age, engaged in agricultural pursuits, of good character, is eligible to membership.

The grange is not endowed with perpetual motion and must therefore be acted upon by some force to keep it running. Each member is taxed a small, very small fee, payable quarterly to pay expenses of administration of general offices.

The grange is capable of great good to its members. It is a bond of union, a pacifier, a humanizer, and a protector, in which the aggregate strength of all may supplement the individual strength of each.

The grange does not create rights; it seeks only to protect its members in the enjoyment of the rights they already possess.

The grange in its best and highest sense is simply a means to attain an end—the good of the people. Its platform of principles is time-tried and time-honored; and appeals with winning eloquence to every intelligent, progressive farmer who gives it a careful reading.

The grange is not a political party organization and has no right either in charter or ruling, to proscribe any member for any opinion he may hold or express. Members of the grange do not lose their individual character—their free agency to think as they please and act as they please, provided of course and always that their freedom of action does not interfere with like freedom of action of others possessing equal rights with themselves.

Personal liberty is a condition of free agency—a prime factor of humanity. The grange therefore cannot circumscribe the personal liberty of its members in any way without doing violence to itself and inviting disintegration.

The grange has made mistakes; otherwise it would not be human. Misguided or designing persons, for selfish or partisan ends, have side-tracked granges here and there and they have withered like the "branch severed from the vine."

As a great political lever to lift any man into office, the grange is a stupendous failure. The force of party cohesion is reduced to the minimum, and



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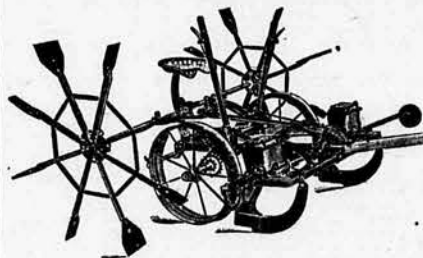
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BRAINS COUNT.

We will give \$500.00 in Gold to anyone who will arrange the twenty letters printed at the left into three names denoting three well-known cities of the United States. Remember, we do not want one cent of your money. There is only one condition, which will take less than one hour of your time. In making the three names, the letters can only be used as many times as they appear, and no letter can be used which does not appear. After you have found the three correct names you will have used every letter in the twenty exactly as many times as it appears. We make this liberal offer to introduce one of the most charming and interesting family 96 to 144 Column monthly magazines to as many families in the United States and Canada as possible. The best authors produce. Try and Win. If you will make the three names and send them to us at once, who knows but that you will win the prize? Anyway, we do not want any money from you, and a contest like this is very interesting. As soon as we receive your answer we will at once notify you. You will then know your solution is correct. We sincerely hope you will try, as we shall give the \$500.00 away anyway. Do not delay. Write at once. These Free Gold Cash awards cost us vast sums of money, but they are a great big advertisement for our magazine. We do not care one bit who gets the money. Indeed, we are glad to give the \$500.00 in Gold Free, because it helps us to interest people in our great magazine. No matter how far away you live from us, you have an equal chance in this Grand Free Gold Distribution. Distance does not make one bit of difference. We treat all in a just and honorable way, and are too well known as an honest and responsible publishing concern to in any way do a dishonest or questionable act. The \$500.00 in Gold is given away exactly as represented. If you are smart and clever and will patiently try to make out the names of the three well-known cities of the United States, and send us your answer without one cent of money, we will immediately notify you upon receipt of your solution. You will then know your solution is correct. These are days of keen competition among publishers of magazines, and great sums of money are being given away for advertising purposes. We are a rich publishing house and do not propose to let any other magazine out rival us. We have the gold to give away. Have you the brains to get it free? It does not cost you one penny to try. Write at once. Brains are winning more of the golden prizes of life to-day than ever before. Just try and see if you can make out the names of the three cities. Maybe you can do so. With our grand offer, it is well worth trying. If you do not succeed at once, don't get discouraged and drop it. It can be worked out, and some one is bound to give the correct solution. In our past contests where we have given away great sums of cash, we have found that the successful winners were those who were determined they would win and were willing to sit down and patiently study out the puzzle. Commence right away on this contest and see if you can make out the names of the three cities. You might get some friend to help you. It is very interesting to study and solve a solution of this character. An alert and clever person will find it a very ingenious "mix-up" of letters which can be straightened out and made to spell the names of three well-known cities of this great and growing country. Remember, this is not a contest where you are asked to send any money with your answer. We don't want you to send us any money, because we are giving away the \$500.00 in Gold as a perfectly free gift, to create talk and interest in our most charming magazine. Now, if you can make out the names of the three well-known cities, write them in a letter and send to us, being very careful to write your name plainly and giving your full postoffice address. We will immediately notify you. Our advice is to give this immediate attention. You don't often have a chance like this to enter without cost a \$500.00 in Gold Free Contest. Write at once to METROPOLITAN AND RURAL HOME COMPANY, 20 North William Street, New York City, N. Y.

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ambitious grange leaders who have aspired to office and relied on grange support have signally and always failed, as they deserved.

To the man who joined the grange with the idea of aiding his neighbors to dignify and ennoble agriculture, make home brighter and burdens lighter, the reward has been coming in regular installments ever since. The signs of

the times indicate a growing determination among farmers to pool their influence in so far as may be necessary to protect themselves with other interests; and the grange offers the best known medium for concerted along this line.

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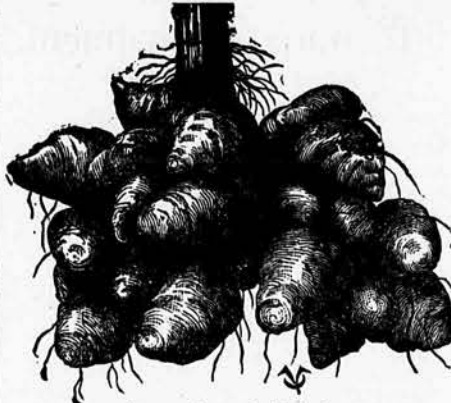
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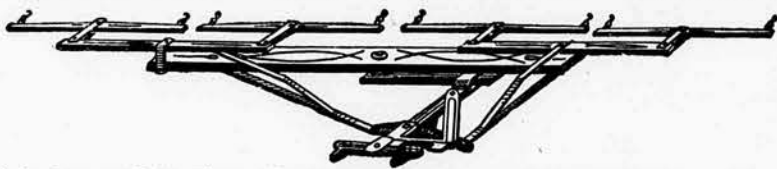
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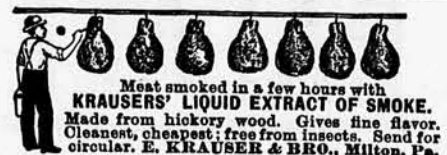
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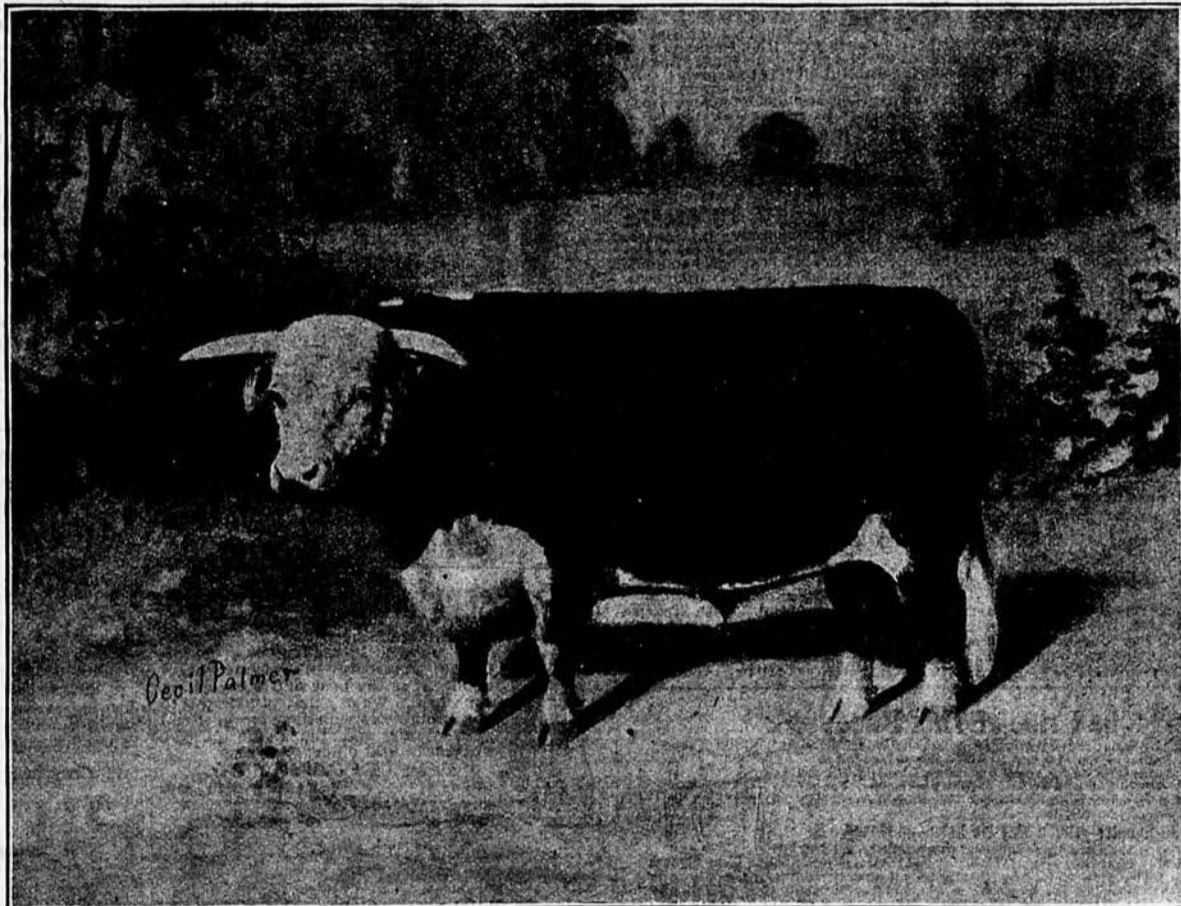
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