

KANSAS FARMER

ESTABLISHED, 1863.
VOL. XXVI, No. 37.

TOPEKA, KANSAS, THURSDAY, SEPTEMBER 13, 1888.

TWENTY PAGES.
\$1.00 A YEAR.

BREEDERS' DIRECTORY.

Cards of four lines or less, will be inserted in the Breeders' Directory for \$15.00 per year, or \$3.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

PROSPECT FARM.—H. W. McAfee, Topeka, Kas., breeder of Thoroughbred Clydesdale Horses for sale now. Write or call.

TWO IMPORTED CLYDESDALE STALLIONS will make the present season at my livery stable, No. 916 Kansas avenue, North Topeka. Terms, \$12 to insure. Also have pure-bred Plymouth Rock eggs for sale—price \$1 per setting. William Finch.

M. D. COVELL, Wellington, Kas., breeder of Registered Percherons Acclimated animals, all ages and sexes. At head of stud, Theophile 2795 (3746), black, imported by M. W. Dunham, and sired by his celebrated Brilliant 1271 (755).

R. I. BLACKLEDGE, Salina, Kas., breeder of Thoroughbred and High-grade Clydesdale and French Draft Horses. Horses for sale. Correspondence solicited.

CATTLE.

J. S. GOODRICH, Goodrich, Kas., breeder of Thoroughbred and half-blood Bulls for sale. Sixty High-grade Cows with calf. Correspondence invited.

D. R. W. H. H. GUNDIEE, Pleasant Hill, Mo., proprietor of Atcham Herd and breeder of fashionable Short-horns. Straight Rose of Sharon bull at head of herd. Fine show bulls and other stock for sale.

VALLEY GROVE HERD OF SHORT-HORNS.—For sale choice young bulls and heifers at reasonable prices. The extra fine Cruickshank bull Earl of Gloster 74528 heads the herd. Call on or address Thos. P. Babst, Dover, Kas.

A. B. SPENCER, Rockport, Ohio, breeder of Ayrshire Cattle. Registered stock of deep milking strains. Prices to suit the times.

GEO. M. KELLAM & SON, Richland, Shawnee Co., Kas., breeders of Galloway Cattle and Hambletonian and Morgan Horses.

T. M. MARCY & SON, Wakarusa, Kas., have for sale Registered yearling Short-horn Bulls and Heifers. Breeding herd of 100 head. Carload lots a specialty. Come and see.

H. DAVIDSON, Wellington, Kas., breeder of Polled Angus and Galloway Cattle. The largest herd in the State. Choice stock for sale at all times. Correspondence and orders solicited.

OAKWOOD HERD OF SHORT-MORN CATTLE.—All recorded. Choice-bred animals for sale. Prices low. Terms easy. Imported Earl of Gloster 74522 heads herd. C. S. Eichholtz & Son, Wichita, Kas.

ZINN & LACKEY, Importers and breeders of HOLSTEIN-FRIESIAN CATTLE. Box 22, Topeka, Kas. Stock of all kinds for sale. Write for wants.

E. S. SHOCKEY, Hereford Cattle, TOPEKA, KAS. **Fine Herefords.**

SPRING GLEN HERD OF SHORT-HORN CATTLE, Buff Cochins Poultry and choice Peafowls. Young stock and birds for sale. Eggs in season. Address L. A. Knapp, Dover, Kas.

JERSEY CATTLE—A. J. C. Jersey Cattle, of noted butter families. Family cows and young stock of either sex for sale. Send for catalogue. C. W. Talmadge, Council Grove, Kas.

J. S. HAWES, Colony, Kas., importer and breeder of Hereford Cattle. Lord Wilton, Grove 3d and Fortune families. One of the largest and oldest herds in the country. Send for catalogue.

W. E. GOULD, Marshall, Mo., breeder of Thoroughbred and Grade Holstein-Friesian Cattle. Calumet 3582 H. H. B., heads herd—a choice butter-bred Netherland bull. Stock for sale.

CATTLE AND SWINE.

J. L. TAYLOR & SON—Englewood Stock Farm, Lawrence, Kas., breeders of Holstein-Friesian Cattle and Poland-China Hogs. Stock for sale. Terms easy.

M. H. ALBERTY, Cherokee, Kas.—Registered Holstein-Friesian Cattle—single or in car lots, recorded Poland-China Swine, Pekin Ducks, Wyandotte, Brown Leghorn, Plymouth Rock fowls. Eggs for sale.

JOHN LEWIS, Miami, Mo., breeder of Short-horn Cattle, Poland-China Hogs, Cotswold Sheep, Light Brahma and Bantam Chickens, Bronze Turkeys, Peafowls, Pekin Ducks and White Guineas. Young stock for sale. Eggs in season.

J. J. MALLS, Manhattan, Kas., breeder of SHORT-HORN CATTLE AND BERKSHIRE SWINE. Some fine young bulls and choice pigs for sale now.

SWINE.

KAW VALLEY HERD OF POLAND-CHINA SWINE.—Tut's Sample at head of herd. All breeders fine individuals, recorded, and of the very best blood. Inspection and comparison invited. Correspondence promptly answered. Also fancy Poultry. M. F. Tatman, Prop'r, Rossville, Kas.

REGISTERED POLAND-CHINA SWINE.—Of the most fashionable families, at low rates. Pigs ready to ship May 1. Also, pure Light Brahma Fowls. Wm. Plummer, Osage City, Kas.

Z. D. SMITH, Greenleaf, Kas., breeder and shipper of fine Poland-China Swine. Also Jayhawk strain of Plymouth Rock Fowls. Write for prices.

J. S. HAWES, Colony, Kas., breeder of Poland-China Swine. Lord Corwin 4th, sweepstakes boar at Chicago and St. Louis, and Moorish King, head the herd.

H. C. STOLL, Beatrice, Neb., breeder and shipper of the most fancy strains of Poland-China, Chester White, Small Yorkshires and Duroc-Jersey Hogs. Special rates by express companies. Satisfaction guaranteed in all cases.

F. W. ARNOID & CO., Osborne, Kas., breeders of pure-bred Poland-China Swine. Breeders all recorded in Ohio Record. Young stock for sale. Also Langshan Fowls and Pekin Ducks. Eggs in season. Write for prices.

SCOTT FISHER, Holden, Mo., breeder of Poland-China Hogs of the very best families. Pigs for sale, both sexes, at prices to suit. All eligible to record. Satisfaction guaranteed. Write me, and mention this paper.

PEDIGREED POLAND-CHINAS.—At prices that will sell them. Well loaded with Corwin blood and other popular strains. Marlon Brown, Nortonville, Kas.

POLAND-CHINA SWINE.—If you want the best that money and experience can buy, send to me. The best herd in Kansas. Satisfaction guaranteed. Special rates by express. G. W. Sloan, Scottsville, Kas.

V. B. HOWEY, Topeka, Kas., (Box 103), breeder and shipper of the most fancy strains of Thoroughbred Poland-China Swine. Light Brahma and White Leghorn eggs, \$1.25 per 13.

POLAND-CHINA SWINE.—From No. 1 breeding stock. All stock recorded or eligible to record. Personal inspection solicited. Correspondence promptly answered. Satisfaction guaranteed. Henry H. Miller, Rossville, Kas.

STEWART & COOK, Wichita, Kas., breeders of Poland-China Swine. Stock of all ages for sale at bottom prices.

ROBERT COOK, Iola, Kas., thirty years a breeder of Poland-China Swine of the very best and most profitable strains. Breeders registered in O. P. C. R.

SHEEP.

I. J. WILLIAMS & SONS, Muncie, Ind., importers and breeders of choice Shropshire Sheep. Large importation August 1, 1888, consisting of show sheep and breeding ewes. Write before buying elsewhere.

SHROPSHIRE-DOWNS.—Ed. Jones, Wakefield, Clay Co., Kas., breeder and importer of Shropshire-Downs. A number of rams and ewes for sale, at lowest prices according to quality.

POULTRY.

100 LARGE, VIGOROUS P. ROCK CHICKS at rock bottom prices. Also Langshan and S. C. W. Leghorn cockerels. Satisfaction guaranteed. G. C. Watkins, Hiawatha, Kas.

N. R. NYE, Leavenworth, Kas., breeder of the leading varieties of Land and Water Fowls. DARK BRAHMAS a specialty. Send for Circular.

EUREKA POULTRY YARDS.—L. E. Pixley, Eureka, Kas., breeder of Wyandottes, B. B. R. Game, P. Rocks, B. and W. Leghorns, Buff Cochins and Pekin Ducks. Eggs and birds in season. Write for what you want.

CHAS. H. HARTUNG, Van Horn, Iowa, breeder of Silver Wyandottes, Plymouth Rocks, Light Brahmans, Partridge Cochins and S. C. Brown Leghorns. Express charges paid on eggs for hatching to all points in the U. S. Send for circular—sent free.

KANSAS POULTRY YARDS.—Fifteen eggs for \$2 from Silver Wyandottes, White and Banded Plymouth Rocks, Langshans, Buff Cochins, or Rosecomb White Leghorns. Wyandotte chicks for sale after August 1. Satisfaction guaranteed. J. H. Stemmer, Enterprise, Kas. Mention "Kansas Farmer."

OAKLAND GROVE POULTRY YARDS.—F. A. A'Neals, Topeka, Kas., breeder of BROWN LEGHORNS, exclusively. Eggs \$1.50 per 13.

SHAWNEE POULTRY YARDS.—Jno. G. Hewitt, Prop'r, Topeka, Kas., breeder of leading varieties of Poultry, Pigeons and Rabbits. Wyandottes and P. Cochins a specialty. Eggs and fowls for sale.

JOHN C. SNYDER, Constant, Cowley Co., Kansas, breeds PLYMOUTH ROCKS exclusively. No stock for sale. Eggs in season. Write for wants or send for circular, and mention this paper.

POULTRY.

JAMES ELLIOTT, Enterprise, Kas.—Proprietor of the Enterprise Poultry Yard, composed of the following varieties: Silver and White Wyandottes, White and Banded Plymouth Rocks, Light and Dark Brahmans, White and Buff Cochins, Langshans, R. C. White and Brown Leghorns, B. B. Red Games and Mammoth Bronze Turkeys. Breeding fowls strictly No. 1. Eggs \$1.50 and \$2 per 13. Also breeder of pure Berkshire Swine and Cotswold Sheep. Swine, sheep and poultry for sale. Your patronage solicited. Golden rule guarantee. Mention the "Kansas Farmer."

COLLEGE HILL POULTRY YARDS.—Pure-bred S. C. B. Leghorns, Houdans, Wyandottes, Light Brahmans and Langshans. Chicks for sale. Send for prices. W. J. Griffing, Manhattan, Kas.

TOPEKA WYANDOTTE YARDS.—A. Gandy, 624 Kansas avenue, Topeka, Kas., breeder of White and Laced Wyandottes. White Wyandotte eggs, \$4 per 13; \$7 per 26. Laced Wyandotte eggs, \$3 per 13; \$5 per 26. My yards are located two miles south of State house, on six acres of ground. I have six pens of Wyandottes. My birds are as fine as anybody's and mated for the best results. I have a few cockerels for sale cheap.

PLYMOUTH ROCKS, WHITE P. ROCKS, ROSECOMB BROWN and WHITE Leghorns and Black Javas. Fowls and eggs for sale. Large illustrated catalogue and price list free. Will send a beautiful little chromo of a pair of P. Rocks for 4 cents in stamps. Address Geo. T. Pitkin, 61 Washington street, Chicago, Ill.

PLYMOUTH ROCK COCKERELS.—Two dollars each; three for \$5. Plymouth Rock and Pekin Duck eggs, \$1 per 13. Mark S. Salisbury, Independence, Mo.

MISCELLANEOUS.

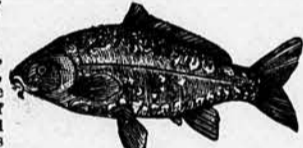
FOR SALE.—English Ferrets. Price, white, \$5 each or \$9 per pair; brown, \$4.50 each or \$8 per pair. W. J. Conner, M. D., Labette City, Kas.

F. H. ARMSTRONG, VETERINARY SURGEON. Graduate of Ontario Veterinary College. All surgical operations skillfully performed. Charges reasonable. Office—214 6th Ave. W., Topeka, Kas.

S. A. SAWYER, Fine Stock Auctioneer, Manhattan, R. Riley Co., Kas. Have Coats English, Short horn, Hereford, N. A. Galloway, American Aberdeen-Angus, Holstein-Friesian and A. J. C. C. H. R. Herd Books. Compiles catalogues.

GERMAN CARP.

A. M. BATES, North Topeka, Kansas. Large quantity of small fry and one-pounders for stocking purposes, which I will sell at very low prices, as follows: Young fry, \$2 per 100; two-year-olds, \$8 per 100; spawners, 50 cents per pair.



Maple Grove Duroc-Jerseys.

We use only the choicest animals of the most approved pedigree, hence our herd is bred to a very high state of perfection. Pigs in pairs not akin. Stock of all ages and sows bred for sale at all seasons. Prices reasonable and quality of stock second to none.

J. M. BROWNING, Perry, Pike Co., Ill.

W. T. DOYLE,

MARYVILLE, MO.,

Breeder of Poland-China Swine of the most fashionable strains, has for sale a choice lot of boars and sows. Young stock not akin for sale. A few choice sows bred to Bravo C. 567 S. R. or Gold Dust 1 1980 S. R. for sale. Correspondence solicited. Personal inspection invited. Special rates by express.

THE GOLDEN BELT HERD OF Thoroughbred Poland-Chinas

One hundred and fifty choice Spring Pigs now ready to ship, at prices lower than ever. Order now, and secure selections from either sex, or pairs, trios, or small herds, not akin. Stock shipped from here over either the A., T. & S. F., Mo. Pacific or St. Louis & San Francisco R. R. All breeders registered in American P.-C. Record. Pedigree with each sale. F. W. TRUESDELL, Lyons, Kas.

\$12 Wire Picket Fence Machine. Lowden's Perfection. Patented. Best Field Fence Machine in the U. S. Agents Wanted. Write for Illustrated Catalogue. Address, L. O. LOWDEN, INDIANAPOLIS, IND.

Agricultural Books.

The following valuable books will be supplied to any of our readers by the publishers of the KANSAS FARMER. Any one or more of these standard books will be sent postage paid on receipt of the publisher's price, which is named against each book. The books are bound in handsome cloth, excepting those indicated thus—(paper):

FARM AND GARDEN.	
Allen's New American Farm Book.....	\$2.50
Barry's Fruit Garden.....	2.00
Broomcorn and Brooms.....	.50
Flax Culture (paper).....	.30
Fitz's Sweet Potato Culture.....	.60
Henderson's Gardening for Profit.....	2.00
Hop Culture (paper).....	.30
Onions: How to Raise Them Profitably (paper).....	.50
Slugs and Earwigs.....	.50
Stewart's Irrigation for the Farm, Garden and Orchard.....	1.50
Tobacco Culture: Full Practical Details.....	.25
FRUITS AND FLOWERS.	
Elliott's Hand-Book for Fruit-Growers.....	1.00
Every Woman Her Own Flower Gardener.....	1.00
Fuller's Small Fruit Culturist.....	1.50
Fuller's Grape Culturist.....	1.50
Henderson's Practical Floriculture.....	1.50
Parsons on the Rose.....	1.50

HORSES.	
Dadd's Modern Horse Doctor.....	1.50
Jennings' Horse Training Made Easy.....	1.00
Horse-Breeding (Sanders).....	2.00
Law's Veterinary Adviser.....	3.00
Miles on the Horse's Foot.....	.75
Woodruff's Trotting Horse of America.....	2.50
Yonatt & Spooner on the Horse.....	1.50
CATTLE, SHEEP AND SWINE.	
Allen's American Cattle.....	2.50
Coburn's Swine Husbandry.....	1.75
Dadd's American Cattle Doctor.....	1.50
Harris on the Pig.....	1.50
Jennings' Cattle and Their Diseases.....	1.25
Jennings' Sheep, Swine and Poultry.....	1.25
Randall's Sheep Husbandry.....	1.50
Stewart's Shepherd's Manual.....	1.50
The Breeds of Live Stock (Sanders).....	3.00
Feeding Animals (Stewart).....	2.00

MISCELLANEOUS.	
American Standard of Excellence in Poultry.....	1.00
Wright's Practical Poultry-Keeper.....	2.00
American Bird Fancier.....	.50
Quincy's New Bee-Keeping.....	.50
Dogs (by Richardson).....	.60
Atwood's Country Houses.....	1.50
Barns, Plans and Out-buildings.....	1.50
Arnold's American Dairying.....	1.50
Fisher's Grain Tables (boards).....	.40
Fuller's Forest Tree Culturist.....	1.00
Willard's Practical Butter Book.....	1.00
Willard's Practical Dairy Husbandry.....	3.00
Practical Forestry.....	1.50
Household Conveniences.....	1.50
Dodd's American Reform Horse Book.....	2.50
Jennings on the Horse and His Diseases.....	1.25
Profits in Poultry.....	1.00
Frank Forrester's Manual for Young Sportsmen.....	2.00
Hammond's Dog Training.....	1.00
Farm Appliances.....	1.00
Farm Conveniences.....	1.50
Household Conveniences.....	1.50
Husman's Grape-Growing.....	1.50
Quinn's Money in the Garden.....	1.50
Reed's Cottage Homes.....	1.25
Dogs of Great Britain and America.....	2.00
Allen's Domestic Animals.....	1.00
Warrington's Chemistry of the Farm.....	1.00
Williams' Window Gardening.....	1.50
Farm Talk (paper).....	.50
American Bird Fancier (paper).....	.50
Wheat Culture (paper).....	.50
Gregory's Onions—What Kind to Raise (paper).....	.30
Gregory's Cabbages—How to Grow Them (paper).....	.30
Our Farm of Four Acres (paper).....	.30
Cooked and Coking Foods for Animals (paper).....	.30
The Future by the Past, by J. C. H. Swann.....	1.00

BLAKE'S ALMANAC
—OF—
Weather Predictions,
From June 1, 1888, to June 1, 1889,
According to Mathematical Calculations based on Astronomical Laws, is now ready for mailing. Price Fifty Cents per Copy. Direct to C. C. BLAKE, Topeka, Kas.
This Almanac gives the predictions for each month separately, and for June, July, August and September the predictions are made for each half month. The temperature, rainfall and kind of weather are given each month for all the different sections of the United States, including the Pacific coast, Canada and Europe. Separate calculations have been made, showing what the temperature and precipitation will be in each locality, each month, which has required a vast amount of calculating. It gives many suggestions as to what crops to plant and when. Nearly every one who has had our former Almanacs has ordered this one. They are almost unanimous in saying our Almanac is the best-paying investment they have made. Address C. C. BLAKE, Topeka, Kansas.

TOPEKA : BUSINESS : INDEX

Of the Representative and Best Business Firms of the Capital City of Kansas.

The KANSAS FARMER endorses the following business firms as worthy of the patronage of parties visiting the city or wishing to transact business by mail:

H. K. TEFFT, M. D.
PHYSICIAN AND SURGEON.
Office—212 West Eighth street, Topeka, Kas.

H. C. ROOT, Attorney at Law. Practices in the Supreme Court and U. S. Courts. Collections a specialty. 110 Sixth street West, Topeka, Kas.

HENRY W. ROBY, M. D.,
SURGEON.

General Manager Kansas Surgical Hospital Association.
OFFICE:—118 Sixth Avenue W., TOPEKA, KAS.

Snyder's Art Gallery.

C. J. SNYDER,
PHOTOGRAPHER,
632 Kansas Avenue, Topeka, Kas.

Large work a specialty. Special prices during September.

For reliable information in regard to Real Estate in Topeka and Kansas, write to or call on

STRICKLER, DANIELS & POUNDS,
515 KANSAS AVENUE, TOPEKA, KAS.

They are exclusive agents for many of the best additions to the city of Topeka, and have a large list of desirable Farms, Ranches and Tracts of Land all over the State, and inside City Property.

JORDAN & CLARK,
(Successors to GEO. W. WATSON),

Real - Estate - Agent,
Southwest corner Sixth and Kansas Avenues,
TOPEKA, KANSAS.

Improved Farms, City Property, Improved and Unimproved Lands in all parts of the State, on Long Time and Easy Payments.

RED STAR
Real Estate Agency.

We exchange Lands for City Property, Goods for clear lands. Have now some

Elegant Stocks of General Merchandise,

Also Clothing, to exchange. Write or come and see.
W. F. FILE, Manager,
521 Kansas Ave., Topeka, Kas.

FARM, AGRICULTURAL AND PASTURE

LANDS

For sale in different portions of Kansas.

Also property in Topeka, and lots in Knox's First, Second and Third Additions, to Topeka, on easy terms.

INVESTMENTS MADE FOR PARTIES.

Interest paid on Time Certificates of Deposit. Call on or write to

JOHN D. KNOX & CO.,
INVESTMENT BANKERS,
620 Kansas Avenue Topeka, Kansas.

WONDERFUL RUSH!

TO THE
SUNFLOWER STATE

The ROCK ISLAND LAND OFFICE is making its customers happy every day by locating them on valuable farms or elegant city property.

LANDS IN THE FAMOUS
Golden Belt of Kansas
A SPECIALTY.

Property in every section of the State for sale or exchange. Low prices, moderate interest and long time if desired. Our property is better and safer for investment than GOVERNMENT BONDS.

Write for lists or call at the
ROCK ISLAND LAND OFFICE,
WILLIAM ALLOWAY & CO.,
323 Kansas Ave., TOPEKA.

TOPEKA
Investment & Loan Co.

TOPEKA, KANSAS.

FARM LOANS A SPECIALTY

Low rates of Interest. Money paid when papers are accepted. Write for terms.

JOB PRINTING

FOR FARMERS! & FOR STOCKMEN!
FOR NURSERYMEN!

Every description of Job Printing neatly and promptly executed. Our facilities are the best and workmanship of the highest grade. Full line of cuts of all kinds of stock. Write for estimates on what you want.
DARLING & DOUGLASS,
Job Printers, Topeka, Kas.



We are Headquarters for all kinds of **MUSICAL MERCHANDISE.**

TERMS CASH, OR EASY PAYMENTS.
E. M. MILLER & CO., TOPEKA, KAS.
821 Kansas Avenue.

DRS. MULVANE, MUNK & MULVANE,



OF THE
TOPEKA
Medical and Surgical
INSTITUTE

Make a specialty of all Chronic and Surgical Diseases. We have practiced medicine and surgery here for fifteen years, and during that time have treated successfully hundreds of chronic cases which had resisted the skill of local physicians.

WE CURE ALL FORMS OF CHRONIC DISEASES,
Remove tumors, cure cancers without the knife, cure piles without knife or ligature. ALL DISEASES peculiar to women speedily and successfully treated. We remove tape worm entire in from two to four hours. If you have any chronic or private disease, you will find it to your interest to write us. Correspondence free and confidential. Refer by permission to Bank of Topeka; John D. Knox & Co., Bankers, Topeka; Citizen's Bank, North Topeka; American Bank, North Topeka. Send for printed list of questions.

DRS. MULVANE, MUNK & MULVANE,
110 W. 6th St., Topeka, Kas.

THE Topeka Automatic
• Self Regulating



CONSTRUCTED ON ENTIRELY NEW PRINCIPLES.

WARRANTED:
THE MOST •
— SIMPLE.
THE MOST •
— DURABLE.
THE MOST •
— POWERFUL.
THE MOST •
— ELEGANT
• APPEARING
WIND MILL
EVER MADE.

The Topeka Wind Mill Manufacturing Co., manufacturers of Solid and Sectional

WIND MILLS; ALSO POWER MILLS OF ALL SIZES, PUMPS, TANKS, PIPE AND FITTINGS

Of all descriptions. We guarantee satisfaction and invite correspondence. Write for Price Lists, etc. Reliable Agents Wanted.

TOPEKA WIND MILL MANUFACTURING CO.,
Topeka, Kansas.

T. E. BOWMAN. H. C. BOWMAN. F. O. POPENOF.

T. E. BOWMAN & CO.,
REAL ESTATE LOANS

116 West Sixth Street, Jones Building,

TOPEKA, - - - - - KANSAS.

To our mortgagors and others who desire to borrow money on good real estate security:

With our increased facilities in our new offices in the Jones Building, and with money on hand to always place promptly any mortgage for which we accept the application, we ask your attention to the following advantages which we offer to borrowers on good real estate in Eastern Kansas:

1. Prompt personal attention to your applications.
2. Ready money, if security is satisfactory and title perfect. We have never yet kept a borrower waiting a day for money.

3. Your interest is paid at our office, with no charge for exchange.
4. A saving of from 50 cents to \$1 expense for recording mortgage—our mortgage, while covering the whole ground, being a shorter form than the long forms in common use.

5. Lowest possible rates of interest, with every courtesy and accommodation to borrowers consistent with perfect security to the lender.
6. Unless otherwise instructed, when mortgage is paid, we always see that it is properly released of record, and pay for recording the release according to the laws of the State, instead of compelling its payment by the mortgagor.

Lastly:—Fair and just dealing with all, recognizing that borrowers have the same rights as persons who have money to lend, not forgetting that we best serve our own interests by faithfully serving, as far as we can, and carefully guarding, the interests of our patrons—their confidence and good will being our best capital.

We thank you for your past confidence and patronage, and should you or your friends have further wants in our line, we would be pleased to serve you.

T. E. BOWMAN & CO.,
Jones Building, Topeka, Kansas.

Fall Term

—OF—

Topeka Business College

Commences September 10, 1883, and continues throughout the year. The year is divided into five terms of ten weeks each. Three terms are necessary for a person of a fair education to complete either the Business or Short-hand course, or four terms to complete both, taking the two at the same time.

The following branches are taught: Bookkeeping, Shorthand, Business Practice, Arithmetic, Writing, Political Economy, Civil Government, Commercial Law, Letter Writing, Spelling, Rapid Calculations and Typewriting on the New Model Crundall, Hammond or Remington machines.

Catalogue for 1883 sent on application to

ROUDEBUSH BROS.,
Proprietors.
521 and 523 Quincy st.



THE LEADING
Furniture House
OF KANSAS.

It is to your interest to get our prices before you buy. Special inducements offered to out-of-town purchasers. **REED & SON, 510 Kansas Ave., Topeka.**

THE GEO. W. CRANE PUBLISHING Co., Topeka, Kas., publish and sell the Kansas Statutes, Kansas and Iowa Supreme Court Reports, Spalding's Treatise, Taylor's Pleading and Practice, Scott's Probate Guide, Kansas Road Laws, Township Laws, Lien Laws, &c., and a very large stock of Blanks, for Court and other purposes, including Stock Lien Blanks, Conveyancing Blanks, Loan Blanks, &c., &c. For fine printing, book printing, binding, and records for County, Township, City and School Districts, this is the oldest and most reliable house in the State.

WASHBURN COLLEGE.
TOPEKA, - - KANSAS.



FOR BOTH SEXES. Collegiate and Preparatory courses.—Classical, Scientific, Literary; also an English course, Vocal and Instrumental Music, Drawing and Painting, Oratory and Elocution. Fourteen instructors. Facilities excellent. Expenses reasonable. Address **PETER McVICAR, PRIN.**

UNION COLLEGE OF LAW.—Fall Term, September 19. For circular, address H. BOOTH, Chicago.

CHICAGO ATHENAEUM--PEOPLE'S COLLEGE
48 to 54 Dearborn St. Eighteenth year. Employs twenty teachers; admits both sexes; gives thorough instruction. Fall term opens September 8. Business and Short-hand College, School of Drawing, Elocution, Mathematics, Languages, Literature, Music. Address **SUPERINTENDENT.**

Agricultural Matters.

WEED SEEDS.

EDITOR KANSAS FARMER:—I have been on the move among farmers near all the time since April, traveling on foot mostly, through several of the northeast counties of this State, and a part of seven counties of Missouri.

In my wanderings I have seen many finely improved farms, as well as many fine fields of wheat, corn, etc.

But I have certainly seen more weeds going to seed the present year than ever before. Now this should not be, as the earth is well soaked and the weather has been such as to give about all the opportunity to plow most of the stubble land, turning the weeds under while green, which will greatly enrich the land in future, to say nothing of clearing your land of weed seeds, which you cannot be too careful to look after. And you need not entertain fears about plowing when the land is wet. No harm will follow such plowing and it is the surest and shortest road to clear a farm of weeds.

Now, a few words about orchards. I will say its a distressing sight to see the dead and dying orchards that I have seen in the two States where I have traveled. And I must say that I have not seen more than three or four orchards, young or old, that have been plowed this season, and on inquiry find that but few have plowed the orchard for years, and many never manured or mulched their trees.

I will ask what can you expect of your trees under such treatment? Now to all let me say trim up, cut out all dead trees, and plow and manure and take good care of your living trees henceforth, feeding them as any other living thing. Orchards should be cultivated well at least every other year.

I will now look after the figures reported in the FARMER from Manhattan by Prof. Graham concerning rainfall. He says that to the question of an increase or decrease he cannot speak for or against. Such a statement confronts the great speech of our honorable Governor, which he took pains to emphasize when made at the so-called State fair at Peabody, in August, 1885. The Professor's statement also rubs the statement of some others near hard enough to cause some smoke. But nevertheless, Brother Graham is right when he says it shows nothing. Yet his figures, if properly analyzed, would show some valuable matter for people, and especially farmers, to consider. The same is true of all such records. To any one, and especially to me, who has made records of the weather daily and crops for about fifty years, and experiments for fifteen to twenty-six years in succession, it does seem very strange that those men who are employed do not understand their own figures well enough to give the results. Perhaps it may be that as I have made these records and experiments myself, that I have taken more interest in the matter than one who is otherwise situated.

Again, our statistical reports show just as far back as kept, some valuable matter. But has any one ever explained the matter? No one to my knowledge. Now if these men can explain their own figures, it would be one grand step in helping to avoid just such mistakes and failures as the people west of a line drawn across the country from Lake Superior to Gulf of Mexico did make this year. But nothing better will ever be the farmer's lot so long as such men as could be truthfully named continue to proclaim and write publicly about matters of which they are wholly

ignorant. And I repeat it—let no man advise his fellow man as to what crop or crops and when to sow and plant, and how to cultivate, unless he is doubly assured that he knows just what he is advising is reliable. And I will further say, that except a few who have recently posted themselves, that not one other of them knows anything about farming. If so, why do you sow any crop—wheat, grass, oats—and do the work you do and lose it? If you know, why do you throw money away for seeds and the labor with it? You must admit it is all blind work—no other solution can be given. And but a very few know to the contrary. Men may write of failures and success, but it will never help any one of you to avoid these matters. If so, why does not the writer cease making such mistakes for himself and tell others what to do, etc.

Now, my indulgent friends, there is only one thing needed to forever settle this momentous question, and that settled, you will farm as understandingly as the professional man does his business. Read, reflect, note it down, and some of you will certainly live long enough to leave your sons and daughters with such knowledge as will enable them to avoid such mistakes as you have made in life. You have learned that we have recurring periods which prove disastrous to farmers, both wet and dry periods, and when you can lay aside your prejudices and look up the evidence that can be found on every hand, and couple it with a long series of records, you will be astonished at the good results and the good that you have done for your children. And I earnestly hope that no man will ever show his ignorance henceforth in proclaiming that any of mortal man's works in "forestry" the country or plowing land, the extension of railroads and telegraph lines causes an increase of rainfall or otherwise. This matter I have looked after for over thirty years, and in doing so I became so fully satisfied that our years moved by cycles, that I have written over my signature for nineteen years what would be the result in general terms of seasons, and crops for fourteen years. And I now have letters which I addressed to Hon. N. J. Colman and A. W. Greely, notifying them of the floods in winter and early spring of 1887, and the terrible drouth that we would have, and of the last winter's snows and the great rainfall that would be the present year, from this vicinity all on to the East. The floods have destroyed many millions worth of property the present year, while millions was lost by drouth. And will it not justify you to investigate this great matter? Ask yourself if the government does not believe it possible to learn what the future seasons will be? Ask yourself if you have noticed these recurring periods—1860-67-74-81-87? Ask yourself if the government thinks this can be learned, if some one else could not do so? Do not be prejudiced, but look at it, and for your own interest, and if you can find any arguments to offset do so. Or if on looking over my record, as can be found from 1876 to 1887 in this State, you can find an error, let us have it, page and date.

I again entreat those who write, be positively sure when you advise about crops, etc.

Mr. A. W. Greely believes the time will come when farmers can know what the seasons will be beforehand, or one of his letters so implies.

Wishing all readers prosperity, and that more would read the KANSAS FARMER and like journals, I am, respectfully yours,
J. C. H. SWANN.
Topeka, August 28, 1888.

Seed Wheat.

EDITOR KANSAS FARMER:—Nearly every kind of crop grown on the farm will gradually deteriorate if seed is saved and sown continuously for any considerable length of time. This can be avoided if proper pains are taken. It is possible with any crop by having a rich soil, carefully preparing in good tilth and using a good quality of seed, taking all the pains possible to secure a strong, vigorous growth, and then from this selecting the very best and using again for seed. It requires care, so that a good quality of product can be secured, and then from a good crop of good grain select the very best and use for seed. If this plan is carefully followed, the necessity for changing seed in order to improve the quality may be largely avoided. This at least is the result of my experience. The best quality of seed must be selected and such conditions given as will give a good yield, and then a careful selection be made. Something above the average, both as regards yield and quality, must be received. Taking the average treatment usually given a crop and the quality and yield of grain as ordinarily secured, and the seed selected from this, even if considerable pains are taken then to secure the best of the crop for seed, the quality will gradually deteriorate and a new stock of seeds be required. My experience is that good seed is a very important item in securing a good yield. In fact, it is one of the essentials in securing profitable crops. It is not only necessary that the seed should germinate. Often a very poor grade of seed, under what we may term favorable conditions, will germinate readily, but in doing so will send up weak, straggling plants that at best will make a very unsatisfactory growth. The quality of the seed has much to do with the vigor and growth of the young plant, and with plants of all kinds a strong, vigorous plant is necessary to grow and mature a good yield of grain, so it pays to have good seed. If you have not raised it in growing your crop, it will pay to purchase whatever amount is needed. The difference in the cost of good seed and that of a lower grade is a small item as compared with the difference in the yield, not only as regards the yield per acre, but also the quality of the grain. A less acreage sown with good seed on reasonably rich soil, thoroughly prepared, will not only yield a larger number of bushels, but it will be of a better quality and return a larger profit than a larger acreage seeded with a lower quality of seed and the soil in differently prepared before seedling.

N. J. SHEPHERD.

Eldon, Miller Co., Co.

A Query About Crab Grass.

A correspondent in Indian Territory writes to the KANSAS FARMER, asking whether crab grass is a friend or a foe to the farmer. He says his ground has been neglected several years, and weeds that grew were burned off in the spring. This year, his corn ground, about earing time began to grow a coat of crab grass, so that by the time the corn was ripe, a heavy growth of grass was seen among the stalks. "Our oat ground is now covered," he says "with a growth, mostly crab grass, that would cut one and one-half to two tons per acre. I shall turn this under while green. As fast as our corn is gathered I shall turn under weeds, grass and stalks, and it is my impression that it will be of great value to the ground."

Then he renews the question and says: "Is crab grass a friend? I shall be glad to have the opinion of those more experienced. I will say that it seems to grow well in the heat of the season and will make hay or pasture at a time when it is most needed. It did not take possession of our cornfield until the crop was made, and it will certainly prevent the sun from burning or the rain from washing the ground."

Crab grass does make pasture and hay, but we do not know of a farmer anywhere who raises it for such purposes. In our opinion the best thing to do with it when it gets a start, is to plow it under just as the seed is forming and before the stalk or seed is ripe. We had one bit of experience with a heavy coat of crab grass on oat stubble ground. It was plowed under deep while green, early in the fall, and the ground was plowed shallow the next spring for corn. It was poor ground, but a fair crop of corn

grew on it, and we attributed part of our success to the green manuring.

It is a troublesome grass and ought to be kept off the farm. Sorghum will grow in a dry season if well started, so will milo maize, rice corn and Kaffir corn, and they can be grown for pasture by sowing the seed thick.

Farm Notes.

Use a little salt in the food for the stock the same as you do your own. It increases the flow of milk and improves their general health.

Select corn carefully from the best stalks, choosing the choicest ears, and then hang them in a perfectly dry place where they can not freeze.

No grain should be sown with the grass seed. It will pay in the end to give the grass seed the best chance. It is not a temporary crop that we want, but a permanent one.

A dip for scab composed of twenty-five pounds of tobacco, with five pounds of sulphur extra, in 100 gallons soft water, is highly recommended and is considered entirely non-injurious by a sheepman in Montana, who has tried it.

There should be, for a strong permanent seeding, two bushels of orchard grass, two of red-top, two of blue grass, and one of meadow fescue. These grasses should be put in on land made as mellow as possible, and free from clods and lumps.

One man in Byers, Colorado, has South-down lambs not more than six months old that will turn the scale beam at 140 pounds each. They were brought from Canada, and it is estimated that they will clip twelve pounds of wool at least by the time they are fourteen months old.

If a bushel of old corn returns you about forty-nine pounds of meal at one trip and forty-seven at another, don't jump to the conclusion that the miller has taken too much toll. Corn that is new will waste by evaporation nearly two pounds to the bushel more than corn that is old and well dried.

Sheep manure contains from 90 to 95 per cent. of the plant food contained in the rations consumed by the sheep. It is, therefore, a very rich fertilizer, as experience has shown. It is especially rich in nitrogen in an available form, and for that reason is excellent for use as a starter in the hill for corn and potatoes.

Mr. J. H. Sanders says that in times like these it may be questionable in many cases whether even good cattle can be fed at much of a profit; but if there is any money at all in beef production it can be made only through the best cattle. There is no one seeking to get rid of good cattle, but on the contrary, there are thousands of prudent farmers who are taking advantage of present opportunities to fit themselves out with better animals than they have heretofore owned.

A New England farmer gives the following as his method of manufacturing bone dust: From 150 pounds of steamed, ground bones, separate fifty pounds of the finest. Put the coarser 100 pounds into a steamer or kettle with an equal weight of water, cover and boil about an hour. Then dip out the contents into a half hogshead tub while hot, and gradually pour into it about fifty pounds of oil of vitrol, stirring the mixture. When effervescence has ceased, add the remaining fifty pounds of dry, fine bones and mix thoroughly. Bones which have had the grease and glue removed from them are much easier dissolved than raw ones.

Blood Will Tell.

There is no question about it—blood will tell—especially if it be impure blood. Blotches, eruptions, pimples and boils, are all symptoms of an impure blood, due to the improper action of the liver. When this important organ fails to properly perform its function of purifying and cleansing the blood, impurities are carried to all parts of the system, and the symptoms above referred to are merely evidences of the struggle of nature to throw off the poisonous germs. Unless her warning be heeded in time, serious results are certain to follow, culminating in liver or kidney disorders, or even in consumption. Dr. Pierce's Golden Medical Discovery will prevent and cure these diseases, by restoring the liver to a healthy condition.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

OCTOBER 11.—John Lewis, Poland-Chinas, Marshall, Mo.

About Feeding Hogs.

The following suggestions were compiled by James Cheesman, of Ontario, in his little pamphlet on Swine Husbandry:

"The late Sir Erasmus Wilson defined disease as 'Malnutrition,' saying: 'Given a power of regulating nutrition and we can control all diseases.' If the dictum of this distinguished physician be taken as correct, and it may be assumed that there are few scientists who could dispute its physiology or pathology, then it follows that nutrition is an unbroken continuity of healthy, active waste and repair, expenditure and income, and a simultaneous process from birth to slaughter. Any interruption of this harmonious progression is an arrest of growth, and when once it occurs it will be followed by several days and longer, as there is no instance on record of animals striking for a single day through inability to grow, and continuing the next day and straight on. Any interference with the animal's habits of feeding and shelter will be likely to disturb its comfort and digestion, and must, in the interests of pig economy, be guarded against with the greatest of care. With pigs, as with other animals and plants, the great battle of healthy, vigorous life must be fought out in infancy, and especially during the first twenty or thirty days. Primarily they will receive their constitutions at birth, but the feeder must take responsibility for them after. The lack of nutrition, resulting from improper food, is forcibly stated by Prof. Henry, of Wisconsin, in the report of his feeding experiments for lean and fat. The bones of Wisconsin corn-fed hogs are so weak that in many cases their legs are broken in handling on and off the cars, thus indicating weak frames and feebleness of constitution. Persistence of practice in right feeding for four or five generations will produce animals entirely different to those we now have, and give them a power of growth quite unknown to the existing race. Animals in a well-nourished state may always be known by their outward appearance; the eye, behavior, skin, temper, their appetites, and enjoyment of food. To succeed as a feeder one must know his animals individually, and be known by them. A fact of great importance to a breeder and feeder is that the length and weight of the intestines of the lean-fed hogs were greater than those fed on corn only. Prof. Sanborn's Missouri work in the same line shows that exclusive corn or starchy food feeding favors an abnormally small amount of hair and a thin skin, inducing super-sensitiveness to extremes of weather and great liability to congestion and inflammation of the internal organs. The amount of blood is below normal, and the strength of the bones and organs of locomotion reduced greatly, in some cases by one-half. Pigs rightly fed absorb into their blood the elements of lean, fat and bone in such close association, that it is not deposited in layers of lean and fat, but is evenly distributed, marbled, or streaky, as the bacon-curer would say. In all successful practice growth does not mean so much a month, but an unbroken daily gain of flesh. We must engrain on our minds this idea of continuity of nutrition if we are to rescue the pig from the slough of neglect and disease in which he is now too often

found. The absence of correct views of the meaning of this word nutrition, lies at the basis of failure in all our efforts to grow plants and animals. Hence it is that two men comparing results in the same kind of work, using nominally the same quantities of feeding stuffs, arrive at totally different conclusions. In roots and ensilage the growing and harvesting of the crops may give double as much dry matter in one case as there is in the other, and a relatively greater food value pound for pound to the driest crops. Specific gravity is a good test of quality in the majority of cases. Remembering that food and nutrition lie at the foundation of all improvement in breeding, let us not imagine that a breed like the Large Whites, which has been bred longest for the special purpose of lean meat, will relieve us of the duty of rational feeding if we adopt it. What has been improved by a long course of special feeding can only be maintained and advanced by continuing the practice. The carnivorous appetite of a sow, referred to by Mr. Theodore Louis, is unnatural, and if his statement (that she eats her afterbirth) be taken in connection with others I have quoted from him, it indicates the unsatisfied nitrogen and bone hunger of numerous generations of pigs fed on corn or other starchy food."

The Shropshire-Merino Cross.

In reply to yours of a recent date, making inquiries as to my experience in cross-breeding the Shropshire and Spanish Merino, will give the result of the different crosses:

In 1860 and '61 I established a breeding flock of Spanish Merinos, original stock selected by the Hon. W. R. Stanford, of Orwell, Vt., and myself from the best end of some of the best bred flocks in Addison county, Vt.

In 1873 I brought out from England two Shropshire rams and sixty-three ewes, to establish a stud flock of that breed.

My first cross was the result of an accident. It astonished me—the length of staple, comparative fineness and thickness of fleece, its weight and bulk, also the evenness in quality in wool-sorters' hands.

Manufacturers tell me there are in the ordinary fleece eight qualities—in this cross-bred but four—and in some two.

In the first case, one Merino ewe had twins.

The next year, 1874 and '75, I bred five ewes to Shropshire rams. The next year, twenty-five, and in 1877 all of my Spanish Merino ewes—600.

I like the cross of the Shropshire ram on the Merino dam the best. You get a longer staple and more lofty style than when you cross the Merino ram on the Shropshire dam. The character of fleece sympathizes with the male in characteristics, but in the main combines the good qualities of both breeds.

The cross-bred is a hardier sheep than either breed that produces them. The half-bloods mature as early as the Shropshire, making equally as heavy sheep running on the same range.

Rams two years old will weigh 200 pounds without grain or pampering, and will shear sixteen to eighteen pounds unwashed wool, that will not shrink to exceed 65 per cent.

My flock averages about thirteen pounds a year, but are shorn twice.

I have made second cross on the half-blood ewes with Shropshire rams. You get a sheep whose outward appearance is Shropshire, if anything, rather better in symmetry of form. Hornless, height, face and legs wholly Shropshire, but the fleece has more crimp than the full-blood Shropshire, weighing more, but not so hardy as the half-blood.

Have also made the cross of Merino

ram on the half-blood ewe. In this you approach toward the Merino rapidly. The rams of the three-quarter Merino have a trim, neat horn, about two-thirds as heavy as the full-blood Merino. The fleece is a delaine wool of soft quality and good length of staple and weight. The sheep are hardy, and in size will average between the Merino and Shropshire.

In making these crosses, the two bloods "nick," combining the good qualities of both breeds—size, length of staple and comparative dryness of fleece on the one side, with the fineness and thickness on the other.

And in breeding from these cross-bred rams they breed straight out from themselves, reproducing their combined good qualities; even the one-fourth Shropshire and three-fourths Merino give lambs that develop rapidly and shear fleeces of a very marketable wool.

I have bred the half-blood ram to the three-fourths Merino ewe. The product is intensified on both sides. The cross shows more Shropshire than the half-blood, is a hardier and more robust sheep than either half or three-fourth Merino; also the wool is longer, and they will shear from two to three pounds per annum more than either the half-blood or three-fourth Merino. The wool is harsher to the touch than the half-blood. It is a cross that I like on account of the hardihood of the sheep. All of the crosses are prolific breeders, good milkers and good mothers. In my experience from observation the Shropshire is the only mutton breed that you can cross with Merino and know what you are doing, for the crosses are true to one another in style and form. When you have seen one you have seen all.

The half-bloods all look alike, so with the three-fourth cross; also with the one-half on the three-fourth Merino ewe cross. Hence I say the blood "nicks."

I have written at length for your personal benefit, not for publication, for I conclude from your comments of August on Col. Curtis you are a "douting Thomas" on cross-breeding.—J. B. Hoyt, in *American Sheep Breeder*.

Clean the Horse's Skin

It is not enough that the groom should merely clean off the dry deposits that remain from the sweating process through which the horse may have gone. This, it is true, removes the apparent foulness, but it is far from meeting the work that comes under the head of "grooming." There is no way in which one can do the horse more real service in the way of keeping him healthy, than by washing his skin with water as hot as the hand will bear. Whether this is done immediately after a drive when the horse is perspiring freely, or when at rest and the skin is perfectly dry, a large blanket should be provided to cover the animal and keep it covered during the process of washing, keeping it on the shoulders while washing the hind-quarters, and vice versa.

Provide yourself with a large sponge and a piece of good soap, or, instead of this, an ounce of aqua ammonia. Put this into a quart of water if it be of the highest strength, and into a pint if it be of low grade, and after moistening the hair and skin with the hot water, with a small sponge rub the surface over with the ammonia water, seeing to it that it reaches the skin. Then wash the hide and hair thoroughly, scraping the water out of the hair with a wooden or other scraper having a thin, smooth edge. Rub dry with a woolen cloth and cover with a dry blanket, keeping the horse out of a current of air, if this be cold. Be especially careful if the horse is exhausted by having had a hard drive.

Merely cleaning the dried sweat from

the hair of a horse is a small item in the process of thorough grooming and cleaning. It should be remembered that it is the skin, and not the hair that carries on the process of eliminating such secretions as the body requires relief from; that is, such as escape through the pores of the skin. The intestinal tract and the kidneys and bladder present but a limited surface for the elimination of refuse from the body, as compared with the skin, yet, when a horse gets sick how ready men are to say, "give him a physic"—salts or aloes or "give him a diuretic"—niter or pumpkin seed tea. An ounce of prevention is, as often stated, worth a pound of cure, and if, in conjunction with care in feeding—feeding enough and not too much, and of the right kind—that portion of the duties of the stable that comes under the head of grooming be carried out as here indicated, we would not so frequently as now need the internal agents referred to.—*Rural New Yorker*.

Horse Whispering.

It is commonly believed that there are undoubtedly mysterious influences by which an immediate ascendancy is gained over the horse independent of the process of teaching or promptings of affection. There was formerly living in the county of Cork, Ireland, a family who laid claim to the possession of a secret by which the wildest or most vicious horse could be tamed. This secret is said to have been originally imparted by a Bohemian gypsy to the then head of the family, a century and a half ago, and to have been regularly transmitted, as a parting legacy at the time of death, from the father to the eldest son. Possibly there may be in the county of Cork a scion of the family still practicing, with more or less success, the art of "horse whispering," but it is an indisputable fact that at the commencement of the present century the fame of Con Sullivan, the then head of the family, for miraculous cures of vicious horses, had spread far and wide throughout Ireland.

Among the many well-attested accounts of the wonderful achievements of Con Sullivan, "The Whisperer," the services which he rendered to Col. Westerra, who afterwards succeeded to the title of Rossmore, were the talk of the whole country. The Colonel had a splendid race horse called Rainbow, and he was anxious to run him at the races on the curragh of Kildare, but he was so wild and vicious that his owner found that he must give up all thoughts of bringing him out and running him. He would bite every one who went near him, like the present Lord Falmouth's brute Muley Edris, who "savaged" the late Fred Archer's arm, and it was necessary to tie up his head when the groom who attended him was with him. If a horse chanced to be near he was sure to bite him or try to; and the legs of the jockey who attempted to mount him did not escape his fangs. Lord Donerville said he knew a person who could cure him, and a wager of £1,000 was laid on the matter. A messenger was dispatched for Con Sullivan, who was known throughout the country side as "The Whisperer," from the supposition that he whispered into the horse's ear, by which means he quieted such as were unruly. When he was told the state of Col. Westerra's horse he desired to go into the stable to see him. "You must wait till his head is tied up," was said and repeated by those present. "No occasion," said Con, "he won't bite me." So in he went, after emptorily ordering no one to follow him till a given signal should imply that they had his permission. He then shut the door for the unenviable tete-a-tete.

In a little more than a quarter of an hour the signal was heard. Those who had been waiting in alarm for the result rushed in and found the horse extended on his back playing like a kitten with the Whisperer, who was quietly sitting by him. Both horse and operator appeared exhausted, particularly the latter, to whom it was necessary to administer brandy and other stimulants before he could be revived. The horse was perfectly tame and gentle from that day.

In the spring of 1804, Mr. Whaley's King Pippin was brought out to run at the curragh of Kildare. He has been described as a horse of the most savage and vicious disposition; he had a habit of flying at and worrying any person who came near him. When he could turn his head round he would seize his rider's leg with his teeth and drag him from his back. The difficulty of managing such a horse may be conceived, and on this occasion it was impossible to put a bridle on him. The Whisperer was now sent for. He remained shut up in the stable all night. In the morning King Pippin was seen following him like a dog—lying down at the word of command, and permitting any person without resistance to put his head into his mouth, while he stood "gentle as a lamb." He was brought out in the course of the meeting, was run, and won the race.

The fame of the Whisperer had now spread throughout the country, and his services were in extensive demand. This extraordinary person has been noticed in many and various publications. Crofton Croker speaks of him in his "Fairy Legends" as "an ignorant rustic of the lowest class, while he bears ample testimony to his extraordinary powers."—*Farming World*.

In the Dairy.

AN ENGLISH DAIRY BARN.

A practical work on dairy farming, by H. M. Upton, Brighton, England, contains much valuable information, which will be found useful in this country as well as Europe, consequently we produce his remarks on

FARM BUILDINGS.

Warmth.—A cow-house must be thoroughly warm, dry, well ventilated and well drained. Seeing that a certain portion of the food eaten by animals goes to keep up animal heat, it follows, of course, that they will require more food, other things being equal, in a cold lodging than in a warm one. "Cows will require 33 per cent. more food in a cold house than they will in a warm one, otherwise the yield of milk will greatly decrease. Thus it is economy in food, and consequently in money, to give cows warm places to live in."—(Prof. Arnold.)

Dryness.—Every part of the shed in which cows live must be perfectly dry, and any defect in this respect must be remedied the instant it becomes apparent, as cows are very liable to get "chilled."

Ventilation.—It is of primary importance that the cow-house should be thoroughly well ventilated without being in the slightest degree draughty. Cows, like human beings, require fresh and pure air the whole twenty-four hours, and not merely when they are out of doors, and if they do not get it their health will be certain to suffer. If the cow-house is imperfectly ventilated it will soon smell disagreeable, and the consequence of that will be that the milk will absorb the smell at milking time, and be more or less injured by it. Since hot air is lighter than cold air, easy means of exit for the former should

be provided as high up as possible, while ventilators to admit the latter can be placed low down; and the stalls should be ventilated from head to tail of the cows, otherwise the drain being behind them their food may become impregnated with effluvia in the air driven over it from the back of the stall. "Louvre-boarded ventilators, six feet long, three feet wide, and two feet six inches above the ridging should be provided for every six animals."—(P. McConnell.)

Drainage.—Of not less importance is it that the best possible system of drainage should exist, and that everything connected with it should be thoroughly well done. Surface drains only should exist, and specially made bricks can be purchased for the purpose. We do not like the arrangement where from the end of the floor of the stall there is a sudden drop of six or eight inches into the drain. The liquid manure should have free and easy means of exit from the stables, unless absorbed by proper materials put down for the purpose. If the drainage is imperfect the cows will suffer in health, and the purity of the milk will be impaired as much, if not more, than by imperfect ventilation.

Light.—Light should be plentiful in cow-houses. Cows are entitled to enjoy light with the rest of creation; and besides, without it the house will never be kept sufficiently clean. It is a golden rule to insist on perfect cleanliness in all holes and corners of the sheds, for then cleanliness in the middle of them will follow of itself. Glass tiles are sometimes used in sheds to admit light.

Floors.—A good non-absorbing substance should be used for the floors of the shed, and the stalls should be long enough to prevent the cows from standing their hind legs in the drains, and not so long that all the manure is deposited inside the stall.

Stalls.—The stalls should be from nine to ten feet broad (for two cows), and have a slope in the length of from three to four inches. No sides are necessary to the stalls beyond small wings of boarding or something of that sort; even this is not absolutely necessary so long as it can be arranged that the cows shall not be able to reach each other's food. Each cow should have about 600 cubic feet at least air space in the shed, with perfect ventilation.

Doors.—It may be well to note that the doors of cow-sheds are frequently made too small. It must be remembered that a cow heavy in calf takes up a good deal of room. We should say from four to four and a half feet is about the size for the door. If it is wider than this more than one cow will try to get through at a time, and a crush will ensue which may very likely seriously injure the animals. The door should open outwards.

Windows.—Windows should be a good size, and so arranged that when open the air does not blow directly on to the cows.

Roof.—For the roof, either slate (which is perhaps the cheapest) or pan tiles. These latter are warmer than slate in winter and cooler in summer. The same remark applies, but in a stronger degree, to the advantages of tiles over iron roofing. We should be inclined to recommend an open roof to a cow-house, as being more airy and permitting easier ventilation; but, if necessary, the space under the rafters can be converted into a loft by putting a ceiling. In this case we should advise ceiling being made of planks, and covered with lath and plaster, to prevent fumes of stable getting into the loft, which would be highly undesirable if food were kept in it. Cows, unless very hardy pressed by hunger, will not eat food that smells of stables.

Mangers.—Mangers should be nearly

level with the ground, ten or twelve inches deep, about fifteen inches wide, and three feet long, and so arranged as to be easily cleaned and with no sharp edges anywhere about them. Each cow must have a separate manger—that is to say, there must be a division in the manger between each cow, otherwise they will interfere with each other's food.

Drains.—The drain at the back of the stalls should be from fifteen to eighteen inches broad, with a good fall towards the tank or manure pit which is to receive the manure. This receptacle, whatever it is, should be quite outside the cow-house, and must be protected from rain, which greatly injures manure.

Water.—We think that, under any circumstances, it is advisable that water should be laid on to a cow-house that is to contain many cows. It is an absolute necessity when the system known as "soiling" (i. e., stall-feeding) is adopted to any extent. If necessary, a cistern should be made conveniently near to the shed, which could be filled at pleasure. It should be large enough to contain water for the cows for twenty-four hours. If we allow from ten to fifteen gallons of water per cow per day, we shall probably have enough and to spare for flushing the floors and drains of the cow-house, which should be done twice a day. An india rubber hose, which will "command" the whole cow-house, attached to the water pipe, will be found very convenient for this purpose. The water should be supplied to the cows in their mangers, and, if possible, each cow should get her water separately without its having to run through the mangers of other cows to get to her. This can be easily done by having the supply pipe run the whole length of the mangers, and a separate tap for each cow. This will insure purity and freshness in the water, which are matters of the greatest importance. The cistern supplying the cow-house must be kept scrupulously clean, and free from all decaying matter, dead leaves or dead animals. To this end a good movable lid should be provided, which can be easily removed when the cistern has to be cleaned or inspected.

Loose Boxes.—One or more loose boxes should be provided, where space admits of it, for cows to calve in, and there must be no sharp edges or corners, which, indeed, should be absent from every part of a cow-house. It is as well to have a hospital box, and in some cases, where cows are bought, a box for "quarantine."

Standing of Cows.—The question as to what is the best method of standing cows in a shed is one not easily answered. Situation of the cow-house, the number of cows, the space available, these all have to be considered; but it may be noted that it is a distinct advantage to feed cows from the front of their stalls, both as being more convenient and disturbing them less. Where many cows are kept the most convenient plan will be to have a broad way through the cow-house, broad enough to admit of the food being brought in on a cart or tramway, and to have the cows standing on either side of it, the mangers being alongside of the roadway. This will admit of their being easily and expeditiously fed, and their feeding capabilities being easily noted.

Calf-Sheds and Calving-Boxes.—The calf-sheds, loose boxes for calving cows, etc., should be as conveniently near the cow-house as possible, if not actually under the same roof, and should be built with the same attention to warmth, dryness, ventilation, as the rest of the buildings; there should be a cooking room, which should contain a boiler and a steaming apparatus, a large trough or tank for mixing the food, and



Mrs. Dart's Triplets.

President Cleveland's Prize for the three best babies at the Aurora Fair, in 1887, was given to these triplets, Mollie, Ida, and Ray, children of Mrs. A. K. Dart, Hamburg, N. Y. She writes: "I consider it very largely due to Lactated Food that they are now so well." Cabinet photo. of these triplets sent free to the mother of any baby born this year.

Lactated Food

Is the best Food for bottle-fed babies. It keeps them well, and is better than medicine when they are sick.

At Druggists, 25c., 50c., \$1.00.
THE BEST AND MOST ECONOMICAL FOOD.
150 Meals for an infant for \$1.00.
WELLS, RICHARDSON & CO., BURLINGTON, VT.

bins to contain the forage, and water must, of course, be laid on.

Pig-Styes and Pigs.—Although we do not pretend to write about pigs, we venture to say one word about them in this place. It will almost certainly be found advantageous to keep pigs in connection with a dairy farm, and we should advise only well-bred animals being kept. Pig-styes should be warm and well ventilated, and as pig manure is very valuable, it should be shielded from wet. Each pig should be allowed about 250 cubic feet of air. Their food should be cooked, and pieces of coal placed within their reach; they are fond of eating it, and it is very good for them.

Requisites for a Small Farm.—For those who have had no experience in such matters, we subjoin a list of the principal things required for the tillage of a farm of about fifty acres, part grass and part arable: One mowing machine with reaping gear for two horses; one haymaker (one horse), one horse-rake, one horse-drill, one roller (two horses), two carts, two horses, two sets harness, one plow, one harrow, one liquid manure cart, one turnip-cutter, one weighing machine, one chaff-cutter, iron pig troughs, rick cloths, etc., etc. This would also be sufficient for a farm of larger dimensions—say seventy acres. If less machinery is used more manual labor will be required.

The same simple, but elaborate and severely accurate, system of treatment is applied to the raising of crops, manuring the land, food, milk and its treatment, the manufacture of cheese, butter, etc., together with much miscellaneous information of a most useful kind to farmers in this part of the country. The book is clearly, and handsomely printed in good large type and published at the moderate price of two shillings.—*American Dairyman*.



OLD TIP

LOG CABINS can hardly be considered handsome or elegant, but they were fit habitations for the rugged pioneers of America. Our ancestors were rugged specimens of noble manhood, complete in health, strength and endurance. Their wholesome remedies are reproduced to this later age, in Warner's Log Cabin Sarsaparilla and Warner's "Tip-pecanoe."

Creameries and Dairies.

D. W. Willson, Elgin, Ill., makes a specialty of furnishing plans and specifications for building and operating creameries and dairies on the whole milk or gathered cream systems. Centrifugal separators, setting cans, and all machinery and implements furnished. Correspondence answered. Address, D. W. WILLSON, Elgin, Ill.

Correspondence.

Mr. Grover Criticized.

EDITOR KANSAS FARMER:—Why are there so many "supposes" and "probablys" in the average tariff articles now appearing on the free trade side of the question? In the A. J. Grover article in the FARMER of August 9, Mr. G. says: "Kansas, in 1878, raised 2,966,040 acres of small grain. Suppose in the last ten years the acreage of small grain in Kansas has doubled. We have this year cut 5,933,080 acres (a mistake or misprint of 60,000 acres is apparent here) of small grain, which has cost the farmers of Kansas 45 cents per acre for twine to tie it up in bundles, aggregating \$2,094,436."

All suppositions aside, and basing our say so on facts, the acreage in small grain is not on the increase in Kansas. Taking Mr. Grover's figures (I have no other for 1878) and comparing them with those of the Secretary of the State Board of Agriculture will prove my assertion. By consulting the third biennial report of the Secretary of the State Board of Agriculture, Mr. Grover will find that Kansas raised in 1872, of fall wheat, spring wheat, rye, oats, barley, buckwheat, flax and hemp, an aggregate of 2,501,375 acres, after four years of supposed increase, but really showing a decrease of about 400,000 acres; and after a lapse of four more years, the same authority (fifth biennial report) shows that the acreage of the above mentioned grains aggregated 2,533,265 acres in 1886. Figures in synopsis of the Secretary's report for July 31, (page 10, KANSAS FARMER, August 9), do not indicate a very great increase for the present season, thus showing that suppositions are poor argument. Mr. Grover assumes in his article that the entire acreage of grain in Kansas is harvested with a twine-binding harvester; but the facts are that in no one season, not to exceed one-half of the grain is bound with twine, and as statistics show that we have had but little more than half the acreage Mr. Grover has figured on, the plain truth will reduce his aggregates 75 per cent., making the "enormous and unnecessary tax" figure out about \$216,000, allowing three pounds per acre, which is above the average amount used. If the material from which twine is manufactured can not be produced in this country I do not see any reason for collecting an import-tax on the raw material; but will Mr. Grover or some other free trader please name the man who will contract to furnish twine to be used in Kansas, at present prices, minus the tariff, should twine be admitted free, the contract to run for ten years?

To relieve the oppressed condition of the farmers may be the cause nearest Mr. Grover's heart; if so, his is a noble purpose; but it is plain that he is badly entangled in binding twine, and I beg permission to urge him to extricate himself at once, lest in his devotion to other interests he should become oblivious of his own welfare and be compelled to float a free trade plank up Salt river with the "enormous and unnecessary" cargo of sufficient twine to tie up in bundles 5,933,080 acres of grain.

That the farmers of central Kansas are greatly embarrassed financially is unquestioned, but as the tariff is not the direct cause of the oppression, I fail to see how they can expect tariff or any other legislation to afford the necessary relief.

Republican farmers may be "blind to their own interests if they do not vote the tariff reform ticket this fall," nevertheless they will hesitate about doing so, so long as such "enormous and unnecessary" exaggerations are made use of in lauding the advantages of free trade.

Think, farmers and laborers, before you vote.
JOHN QUILLEN.
Garfield, Kas., August 27, 1888.

Dairymen--Our State Fair.

EDITOR KANSAS FARMER:—The grand results of the first dairymen's convention of Kansas can be seen in the interest taken in the display of dairy products by the State Fair Association. They have built a grand refrigerator at an expense of several hundred dollars especially for our benefit; they have given space for display of dairy and creamery machinery; have offered good premiums for dairy products and dairy stock; in fact, they have manifested a disposition to encourage the dairy interest

in every way possible. Now, dairymen, let us show that we appreciate their efforts and all go to the fair, and not only go but do something toward making a grand display of dairy products. Remember the State Dairy Association will have an office on the grounds, and some one of the officers will be always in attendance at the office to meet you and shake hands with you and be ready to give all the information we can to all callers. Remember also that the "latch string" of the office will be always out. The Secretary wishes to meet at least a thousand dairy men; when I say men I mean also dairy women, dairy boys and dairy girls; in fact all persons interested in dairying. Let us meet together and have a friendly talk; it will do us good.

R. T. STOKES,
Secretary Kansas Dairy Association.
Garnett, Kas.

Kaffir Corn.

EDITOR KANSAS FARMER:—It is now an undeniable fact that in large sections of Kansas the corn crop is very light, and that the hot, dry weather of July did the mischief.

One year ago I called the attention of Kansas farmers, through your columns, to the uncertainty of making a corn crop in large sections of the state, and the necessity of substituting some feed crop better adapted to the climate. I suggested then that Kaffir corn would fill the bill.

This year I had planted in Dickinson county, about May 10, twenty acres of ordinary upland in Kaffir corn. At this writing practical farmers in the vicinity estimate the yield at not less than forty or fifty bushels, clean grain, to the acre. A frost before September 15 (very unlikely to occur in this part of Kansas) would shorten the yield somewhat. Seventy acres of upland of better quality I had planted to Indian corn at the same time is estimated to yield ten bushels per acre.

The July dry weather and hot winds never affected the Kaffir corn. It kept green and grew right along as though the hot winds were the one thing most necessary for its existence and successful maturity. The storms of the 3rd to 5th of August, that blew down all the corn in the county did not affect it either. Of short stock and rooting deep into the soil, it stands upright as ever, and is the only corn land I can seed to wheat. Had the farmers of Dickinson county planted this crop instead of Indian corn to a sufficient extent to have supplied themselves with feed for the ensuing year, they would be a half million dollars better off than they are. It is also a very valuable forage plant as the blades do not blow off like Indian corn. I have it to sell this year—about 1,000 bushels—and when the grain is ready for market will advertise it in the KANSAS FARMER. The price will be low. Its value as a feed grain is said to be fully equal to Indian corn. Respectfully yours,
Dawson, Pa. JNO. H. WURTZ.

Pond's Business College, Topeka,

Opened up last week with the largest attendance ever enrolled.

The substantial business men are all patronizing this institution in preference to others which are loudly advertised.

Teachers are practical business men of experience and specialists in their line of work. Its graduates are successfully filling responsible positions in this and other cities and are demonstrating better than could be done in any other way the practicableness of the courses of instruction.

Extract from a student's letter: "I am making every day use of the theory taught at Pond's Business College and find them practical in every respect. No man, rich or poor, can afford to miss a practical business education such as you give." This student attended six years ago.

The Topeka Force-Pump.

If you need a good pump come and see the TOPEKA FORCE. It never freezes or loses priming, and is the very best FARM PUMP in the State. Manufactured and for sale by
S. STANTON,
400 Van Buren St., Topeka, Kas.

Refers to KANSAS FARMER.

\$110 will pay for board, room and tuition for forty weeks at Campbell Normal University. Board in the family of the President.

FROM THE FAIRS.

COWLEY COUNTY FAIR.

The sixth annual meeting of the Cowley County Fair and Driving Park Association was held here at Winfield this week, commencing on the 3d and closing to-day, the 7th. Cowley county being one of the best agricultural districts in the State it was anticipated that the fair would be a success both as a show of products and financially. The display of farm products could not have been better. Some people are prone to remark that its the hottest day they ever knew or this is the coldest snap we have ever had in Kansas, and the enthusiastic newspaper man is won't to overdraw in writing of Kansas productions; notwithstanding all this I will take it upon myself to say that I have never witnessed in any county in the State a better display of all that tends to make the farm profitable than was exhibited here at Winfield this week. Among other very noticeable features was the special displays of garden products, everything usually grown in this latitude, demonstrating that southern Kansas soil will produce a multiplicity of varieties, and established the fact that in the hands of skillful husbandmen Eastern or California canned goods could be made to seek some other market with a shorter haul, and thus save to the consumer the unnecessary profit of the middleman.

The display of live stock was a little better than that of preceding years, and among the many individual displays was that of Messrs. Sherwood & Rohrer, of Valley Center, Kansas. These gentlemen had on exhibition a herd of twenty-one Jerseys, headed by St. Valentine's Day 15278, the St. Lambert and Duke 76. This highly-prized animal has developed wonderfully in the past year, and his five calves that were on exhibition convince one of his great value as a sire. The matured cows made a very excellent showing and in all the herd was better than that of 1887. Last week at Wichita it took all first and second ribbons in class and sweepstakes with competition and took more than an average share of ribbons here. Taking into consideration the individual make-up of the entire herd of eighty-seven head, persons wishing bulls to head a herd or breeding stock of this, the greatest of cream or butter cows, can obtain them bred and acclimated at Valley Center without leaving the State.

T. A. Hubbard, of Wellington, Kansas, one of the most successful swine-breeders in the West, had fifty head of Poland-Chinas and Large English Berkshires on exhibition, and was modestly well pleased with his success, having taken fourteen blue ribbons, three of which were sweepstakes. At Wichita last week carried off seven blues, one of which was a sweepstake. Mr. Hubbard exhibited last year at Bismarck, Topeka, Lincoln, Neb., Kansas City and St. Louis, where he came in competition with the best show herds of the country, and at the close returned home with premiums enough to establish the fact that Reme Park Swine Herd was the equal, if not in some points the superior of any in the West.

Isaac Wood, of Oxford, Kansas, had on exhibition twenty-two head of Polands, mostly under 1 year of age, and secured six premiums, two of which were blues. His not showing in many classes because of age did not give him a large range in the competition field, yet he took nearly all that he in class showed for. He is the oldest breeder in southern Kansas, and his herd is one of great individual merit.

Mr. M. B. Keagy, breeder of Berkshires, and J. M. McKee, a special breeder of Polands, both residents of Wellington, were on the grounds, though neither had stock on exhibition. The short hog crop over the State has produced a spirited demand for stock swine, and these gentlemen are taking advantage of the market by not going to the expense of rounding out a show herd this fall.

IN FLORAL HALL.

No single or special exhibit attracted more attention, especially that of the ladies, than did the Davis sewing machine, under the management of State Agent M. R. Roblee, of Emporia, Kansas. The Davis took first premium for best display here and at Wichita. Also first premium for best work. Its competitors were the New Home and the Domestic. I learned that the general office was 48 Jackson St., Chicago. A very commendable feature of this Fair

Association is that the stock is held by 200 members, and that their very liberal policy of charging no entry fees except in the speed department tends to make the exhibitions a greater success. It is now proposed to make general-purpose horses more of a leading feature in the future, such as best walking and best trained, and thus encourage the general farmer to improve the ordinary bred horse, and give the producer of all farm products a fair share of the money appropriated for the speed ring.

PROVISO.

IOWA STATE FAIR.

The Iowa State Fair, at Des Moines, was one of the most successful State fairs ever attended by the writer. As a strictly agricultural fair, complete in every department, it is not excelled by the renowned St. Louis fair. It is a model State fair that other States will do well to emulate. They have every convenience for exhibitors as well as visitors, and are largely patronized by both. The thirty-fourth annual exhibition was a success in every way.

U. P. Bennett & Son, Lee's Summit, Mo., were at the Iowa State Fair, and scored a signal success with their grand flock of Cotswold and Shropshire sheep. With their Cotswolds they won the following prizes: Ram over 2 years, first; ram under 2 years, first; ram lamb, second; ewe over 2 years, second and third; ewe under 2 years, first, second and third; ewe lamb, first; also sweepstakes for best ram and flock. Their Shropshire sheep won sweepstakes on ram, ewe and flock, and a clean sweep of the best class premiums. The flock also won the silver medal for best ram showing best four of his get, also flock premium of \$20 for five fat sheep.

H. C. Stoll, of Beatrice, Neb., showed at the Omaha Fair last week, his noted herd of Poland-China, Chester White, Jersey Red and Yorkshire swine. He made fourteen sales, ranging in price from \$20 to \$25. The herd gathered in all the premiums that he could expect. Mr. Stoll purchased at this fair seven Poland-China show sows from the famous prize-winning herd of D. F. Risk, Weston, Mo., for which very fancy prices were paid.

D. F. RISK'S FANCY POLAND-CHINAS.

At the Omaha Fair and Exposition, last week, Mr. D. F. Risk, of Weston, Mo., showed his renowned herd of fancy Poland-Chinas, making almost a clean sweep of the best premiums, winning the grand sweepstakes prize of \$30 for best pen of hogs—one boar and four sows, in competition with all breeds; also sweepstakes for best sow and best boar, \$15 each. In class he won first premiums on boar under 12 months, best boar under 6 months, best sow 2 years and over, sow under 2 years, sow under 1 year, sow under 6 months, and second on aged boar. Mr. Risk is unquestionably one of the most successful breeders in the West. As an exhibitor of fancy Poland-Chinas he is invariably a winner of the best prizes, as the records of the leading fairs during the past few years will show. His success has been so remarkable that he has not found any other advertising necessary. Last year he sold over \$1,600, ranging in price from \$15 to \$100, an average of \$24.50. To the FARMER representative Mr. Risk made the following statement: "At this fair I have sold fourteen head at fancy prices. This herd was in 1883 and 1884 at Kansas City, St. Joseph and Kansas State Fairs, winning thirty-seven premiums. First on boar any age or breed both years at St. Joseph. First on boar and sow any age at Kansas City in 1884 and second on herd. First on boar and five sows at Kansas State Fair. In 1886 won first premium for best collection of swine at St. Joseph, Bismarck and Kansas City, and sixteen other prizes. A record on collection never made by one breeder in one year before at same fairs. Instead of soliciting orders I insist upon a personal inspection of the herd and depend upon my stock doing its own advertising. Special rates by American Express Co. Stock all registered or eligible. Nothing shipped C. O. D."

POPULAR GROVE STOCK FARM.

Among the fine stock breeders at the Sabetha District Fair last week, I desire to call the attention of our readers to that well-known live-stock auctioneer and breeder, E. Zimmerman, proprietor of the famous Popular Grove Stock Farm, which is so beautifully and conveniently located in Brown

county, this state. As a breeder of Poland-China and Big English Berkshire swine, Holstein-Friesian cattle and Clydesdale horses, he certainly has but few equals in northeastern Kansas.

As proof of this statement it is with pleasure that I announce through the columns of the KANSAS FARMER that Mr. Zimmerman captured the following premiums at the Sabetha District Fair, viz.:

Swine—Poland-China—Boar, 12 months and over, first premium; boar, 6 months and under 12, first and second; sow, 12 months and over, first and second; sow 6 months and under 12, first and second; sow, 3 months and under 6, second; sow and litter, under 3 months, second.

Berkshire—Boar, 6 months and under 12, first and second; sow, 12 months and over, first; sow, 6 months and under 12, first and second.

Sweepstakes—Boar, any age or breed, first.

Breeders' Stakes—Herd of hogs of any one breed, 1 year old and over, first; sow, 1 year old and over, first.

Draft Horses—Mare (Clydesdale), 3 years old and under 4, first premium; horse colt (Clydesdale), 1 year old and under 2, first; sucking colt (Clydesdale), first.

Horses of All Work—Colt (Clydesdale), first.

Mr. Zimmerman may well feel proud of such success and fine stock as the above record would indicate, especially when it is remembered that his worthy competitors were among the best in all the surrounding country, and it is with much pleasure that we recommend him to all lovers of fine stock, and especially those who desire to purchase the best blood.

For further information, we refer our readers to the worthy proprietor of the Poplar Grove Stock Farm, Hiawatha, Brown county, Kansas.

BISMARCK FAIR.

The fair just closed was very meagerly attended with exception of Thursday. The exhibits were not as extensive by considerable as is usual, but the quality was up to the standard of other years. The weather was the most pleasant that could be desired and the grounds were never in more attractive attire. The officers were untiring in their efforts to make the fair a success, and the degree attained may be credited to their enterprise and industry.

Col. Harris, of Linwood, was the only Short-horn exhibitor, and of his stock it is unnecessary to refer, as their merits are well known. Mr. Dix, of Oskaloosa, showed his herd of Holsteins and captured a number of prizes. Wm. Brown was in the ring with specimens from his fine herd of the same stock and was awarded a fair share of premiums.

M. E. Moore & Co., Cameron, Mo., exclusively Holsteins for dairy purposes. They showed a splendid lot of animals with records both in breeding and dairy qualities. Cows were on exhibition which have produced 80 lbs. of milk per day, and 19 lbs. 10 $\frac{1}{2}$ oz. unsalted butter in seven days. They have a number of excellent young animals of both sexes for sale. They stand at the head of breeders in this line in the West.

Note.—Mr. M. E. Moore, proprietor of the Holstein herd at Cameron, Mo., was expert judge of dairy cattle at Des Moines, Iowa, last week, and this week will fill the same position at Lincoln, Neb.

The only exhibitor of Jerseys was Mr. D. D. Cocklen, of Lawrence. The specimens on hand were the top of the pot and were so recognized by the judges.

Among the swine breeders were the well-known firms of J. S. Risk, Weston, Mo., breeder of Poland-Chinas, and Rankin Baldridge, Parsons, Kas., who is a leading breeder of Poland-Chinas in Kansas. His stock won prizes in several classes. He has a reputation for pure-bred stock second to none. His stock is smooth and healthy and in the prize ring are equal to any competition. Several sales were completed at this fair. Mr. F. M. Smith, of Tonganoxie, carried away one of his finest specimens to head his herd.

W. W. Waltaire was alone in the exhibits of Chester Whites. His stock in this line is a regular Jumbo outfit and of course got the recognition they merited.

In the department of horses, Wm. Brown, of Lawrence, Clydesdales; H. C. Cummings, Belvoir, Shires; W. W. Waltaire, Carbon-

dale, Clydesdale stallion; A. L. Mabin, Waveland, horses of all work, and Avery & Coleman, Wakefield, were exhibitors, and all were recognized in one or more of the classes.

Avery & Coleman, Wakefield, Kas., are the most enterprising and extensive of breeders of Percheron and French Coach horses. Their horses at Bismarck Fair attracted general attention. In the prize ring their stock won first prizes over some of the finest competitors. They are supplying the best strains of Percheron and French Coach horses, and have supplied stallions for many of the most extensive breeding farms in the State. They are reliable and careful and guarantee the quality of their stock.

The sheep exhibit embraced Merinos, Shropshires and Cotswolds. The Jewetts, of Lawrence, were the only exhibitors of Merinos, but their herd and class was well represented. McQuitty & James, Hughesville, Mo., exhibited Shropshires and South-downs, and McCandless & Son, Cottonwood Falls, showed handsome Cotswolds. These animals were very creditable and carried away prizes in the departments to which they belonged.

The poultry department was an average exhibit. D. W. Kerns exhibited Toulouse geese and Plymouth Rock chickens. Mrs. D. W. McQuitty, Light and Dark Brahmas, Buff Cochins, Partridge Cochins, Laced and White Wyandottes, Black Spanish, Silver-laced Polish, Golden Seabright bantams, Black-breasted Red Game bantams, white and blue turkeys, Emden geese and Pekin ducks. Harry D. Price, Independence, Mo., Red Pile bantams, White Crested Black Polish, Black and Brown-breasted Red games and Golden Seabrights. R. D. Arnold, Kansas City, Mo., Houdans, Golden Polish, Red Piled Game bantams and Black-breasted Red Game bantams and a dozen varieties of pigeons. J. W. Werner & Sons, Greenleaf, Kas., Light Brahmas. F. Clendenen, Lawrence, Langshans and Dark Brahmas.

The art department was very attractive and was a prominent feature of the fair. The horticultural and agricultural halls were in many respects excellent. The display of the Haskell Institute was a very remarkable exhibit. In agricultural hall the corn, wheat and other farm products were indicative of the great crops of Kansas. Here also was the exhibit of three of the most prominent manufacturers of buggies and carriages, viz.: L. B. Johns, Salina, and Hesse & Sons and J. J. Potter, Leavenworth. This exhibit reflected credit on all of these enterprising gentlemen.

Mr. J. J. Potter stood prominent. The excellence of the work, the beauty and symmetry of the designs were features which did not escape the eye of the judges and of the visitors. In recognition of their merit several of the vehicles on exhibition were sold before they had been on exhibition a day. Mr. Potter's works at Leavenworth are not only extensive, but his workmen are the most capable to be had, and the material is selected with the utmost care. Send for his catalogue illustrating these elegant vehicles and remember to give him your order when you need anything in his line.

Mr. L. B. Johns, of Salina, had eight or ten fine vehicles, and was worthily remembered by the committee handling the blue ribbons. This establishment is turning out fine work and its wares are commanding the attention of the people of the State to a very gratifying degree. Several sales were made at this fair.

Messrs. Hesse & Sons, Leavenworth, had some handsome carriages, phaetons and spring wagons, and were proud of the blue ribbons that fluttered from the bows of his elegant vehicles. They are willing to compare work and prices with any and all comers.

When so-called remedies fail, Dr. Sage's Catarrh Remedy cures.

The editor of the Texas Stockman says that after seeing seventeen dehorned bulls eat at a sixteen-foot trough in peace he is a convert to the idea that the horns must go.

With a feeble appetite and imperfect digestion, it is impossible for the body to secure the requisite amount of nourishment. Ayer's Sarsaparilla not only stimulates the desire for food, but aids the assimilative organs in the formation of good blood and sound tissue.

Gossip About Stock.

There will be a fair at Parsons, Kan., September 24 to 28.

Remember that we can supply "Haaff's Practical Dehorner," the best book on the subject ever published, for only \$1.25, or we will send it and the KANSAS FARMER one year for only \$2.

Rumsey Bros. & Co., of Emporia, made a fine exhibit of Devon cattle, at the Omaha Fair and Exposition last week, capturing all premiums entered for besides making some good sales.

The model Short-horn cow, Fall Creek Rose, the property of Householder & Bertz, Columbus, Kan., won the grand Sweepstakes prize at the Omaha Fair, making the sixth premium of this class this season.

John McDiarmid, of the Live Stock Indicator, was expert judge on sheep at the Iowa State Fair, Des Moines, and did the work in a very satisfactory manner for the association as well as the exhibitors.

Messrs. Hensen & Rathbone, Council Grove, Kan., who have the largest western establishment of Holstein-Friesian cattle, will be at the State Fair, Topeka. They have a lot of choice young things for sale of both sexes.

Elsewhere notice the advertisement of Wm. Brown, of Lawrence, Kan. This gentleman is a breeder of Holstein-Friesian and Jersey cattle of noted butter families, and as a pains-taking breeder he stands at the head with those who make a specialty of improving the bovine species of animal kind.

Frank Crune, manager of the Kansas Hereford Cattle Company, Lawrence, Kan., purchased last week of the Iowa Hereford Cattle Company, the bull calf, What's Wanted, of the Herace and Anxiety strains. This choice animal will be used as one of the herd bulls and is destined to be heard from later when fully developed.

J. M. & F. A. Scott, Huntsville, Mo., sold to D. W. McCrackin, Auxrose, Mo., two young Berkshire sows for \$125, and a four months sow pig for \$40 to W. A. Miller, of McCredie, Mo. The same exhibitors at the Iowa State Fair sold some 400 pure bred pigs to visitors at the fairs. This gives some idea of the season's demand. Breeders who have any surplus should advertise now.

Our young people can not do better than attend Ritner's Commercial college, St. Joseph, Mo., and fit themselves for business.

Eight years' test has demonstrated the fact that the Advance Stock Hydrant is the best stock waterer for winter or summer now in use.

Meadows and pastures may be mended by sprinkling manure on the barren spots and harrowing them over and sowing grass seed on the top.

The queen bee usually lays from February to October, but early in the spring she lays sparingly. When flowers bloom and the bees are gathering honey and pollen, she lays more rapidly.

Attention, Farmers!

The Woman's Exchange, 117 West Seventh street, has become the most popular place in the city as a resort for the hungry. Transient rates 50 cents per meal; lunches from 25 cents upward.

Where sheep are troubled with flies and maggots they rapidly lose flesh, as they get but little rest and have no appetites. Damp pastures are also injurious, often causing foot rot. The sheep should always be sheltered at night.

The greatest gain for the least cost. A good pond (not a mud hole) with the Advance Stock Hydrant attached is the best plan for watering stock. So say over a thousand stockmen now using them. Self-acting! Non-freezing!

Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought.

T. E. BOWMAN & Co.,
Jones Building, 116 West Sixth street,
Topeka, Kas.

KANSAS FARMER only 25 cents to January 1, 1889.

HOME STUDY Thorough and practical instruction given by MAIL in Book-keeping, Business Forms, Arithmetic, Penmanship, Short-hand, etc. Low rates. Distance no objection. Circulars sent free. BRYANT'S COLLEGE, 423 Main street, Buffalo, N. Y.



COMMERCIAL COLLEGE OF KY. UNIVERSITY, HIGHEST AWARD at World's Exposition Book-keeping, Business, Short-hand, Type-Writing & Telegraphy taught. 1000 Students past year. 13 Teachers. 10,000 Graduates in Business. Open Now. WILBUR R. SMITH, Pres. Lexington, Ky.

TELEGRAPHY. Never were the opportunities so frequent, or the demand so great for telegraph operators and railroad agents, as at present. Never were the financial inducements so great as now. The facilities are nowhere better than at the Central Iowa Telegraph and Railroad Institute, at Ogeda, Iowa. Circulars and all information, mailed upon receipt of postal. MABLEY & HALL, Ogeda, Ia.

Young Men You should address us for a beautiful Catalogue and Specimens of Penmanship before deciding what school to attend. While other schools boast of a large enrollment, we make thorough work and close attention to our students a prominent feature, and thus turn out satisfied and successful graduates. CENTRAL BUSINESS COLLEGE AND ELECTIC SHORT-HAND INSTITUTE, Leach & Parker, Prin's.] LEAVENWORTH, KANSAS.

State Agricultural College

Free Tuition. Expenses Light.

Endowment, \$500,000. Buildings, \$120,000
Grounds and Apparatus, \$100,000.

30 INSTRUCTORS. 500 STUDENTS.

Farmers' sons and daughters received from Common Schools to full or partial course in Science and Industrial Arts. Send for Catalogue to MANHATTAN, KANSAS.

Spalding's Commercial College
LARGEST CHEAPEST-BEST
KANSAS CITY, MO., J. F. SPALDING, PRES.
COMMERCIAL BLOCK, Cor. 11th and Main Streets.
Established October 25, 1865—Incorporated July 11, 1867.
All English and Commercial Branches, Phonography, Type-Writing, etc., taught at lowest rates. Unsurpassed Advantages. No Vacations. Catalogues Free. Be sure to visit or address this College before going elsewhere.

Southwestern Business College
WICHITA, KAN. — WRITE FOR CATALOGUE

The only Business College in Wichita, the largest institution of its kind in Kansas. Over 600 students enrolled from June 1, 1887, to June 1, 1888.

RITNER'S COMMERCIAL COLLEGE,
Short-hand Institution
AND
English Training School.

Is the standard institution and the largest in the West. Full information, catalogue, terms, etc., sent free.

Address P. RITNER, A.M., President, St. Joseph, Mo.
SHORT-HAND BY MAIL a specialty. Send 25 cts. for Primer and three trial lessons.

Garfield University,
WICHITA, KANSAS.

For Ladies and Gentlemen

NORMAL AND PREPARATORY,
COLLEGE, THEOLOGY, LAW,
BUSINESS, MUSIC AND ART.

The success of the first session unprecedented. All the Normal classes every term.

THE BEST AND CHEAPEST SCHOOL IN THE WEST.

Tuition and Table Board, ten weeks, \$35; for a year, \$150. Room rent free in the Boarding Halls.

For Catalogue, address H. W. EVEREST, Mentor Ave., or C. W. POOL, Sec'y of Pub. Com., 205 N. Main St., Wichita, Kas.

For Special Music Catalogue, address JOHN W. METCALF, Director, No. 1817 University Ave., Wichita, Kas.

FALL TERM OPENS SEPTEMBER 4.
[Name KANSAS FARMER.]

GOLD Live at home and make more money working for us than at anything else in the world. Either sex. Costly outfit FREE. Terms FREE. Address, TRUK & Co., Augusta, Maine.

The Home Circle.

To Correspondents.

The matter for the Home Circle is selected Wednesday of the week before the paper is printed. Manuscript received after that, almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

The Dear Wife's Hands.

Those hands that once within my own were laid
With touch so soft it thrilled me to the core,
And seemed to tune my heart-strings o'er
and o'er,
How fair were they—the hands of a sweet
maid.

And when into my keeping then she gave—
Those lovely members of a beauteous whole,
How firm the vow within my very soul—
From stain of toll their fairness o'er to save.

But, ah, how vain the vows by mortal made,
How e'er so well man bendeth to a plan,
Though nobly moulded, oft 'tis but a span
And loftiest structures in the dust are laid.

As on in life we've journeyed heart to heart,
'Midst fortune's favors or 'gainst tides ad-
verse,
Those precious hands have never grown
perverse,
But well and faithfully have wrought their
part.

Full oft their subtle pressure on my brain
Hath soothed the madd'ning torture cen-
tered there,
When futile were all arts of healing rare,
And brought to me sweet surcease of all pain.

In youth their tender beauty won me so,
The added charms of beauteous face and
form
I needed not to send the life-blood warm
Through all my being in tumultuous flow.

And now in age, though seamed by labors
past,
Those youthful hands still make the answer-
ing strain
Upon my heart-strings, and the sweet re-
frain
Doth still ascend, and will while life shall last.

—Good Housekeeping.

One heaven bends above;
The lowliest head oft times hath sweetest rest;
O'er song-bird in the pine, and bee in the ivy
low
Is the same love, it is all God's summer;
Well pleased is He if we patiently do our best.
So hum, little bee, and low green grasses grow,
You help to make summer.

—Marietta Holley.

Safety and equal government are things
Which subjects make as happy as their kings.

—Walter.

Home Instruction in Sewing and Cooking.

Home training in sewing or cooking, which has not yet become "old-fashioned" in sensible families, may receive a greater usefulness from incorporation into its best feature of the more scientific methods of the public courses of the sewing or cooking school. Instruction at home in these useful branches is apt to be so desultory and inefficient that some mothers have given up their duties to the public school teacher or have an unsatisfactory course at home; but if they should devote thought in preparation and time in patient lessons, there is no reason why the modern little girl should not become as fine in needlework as her grandmother who practiced upon a sampler, and equally skilled in cooking.

If a public school, in which this part of the manual training system is in vogue, is convenient for visiting purposes, a mother would gain many suggestions from a study of the teacher's methods. Among school exhibitions there are none more attractive than those of sewing and cooking. The little girls in their best gowns, welcoming their mothers with faces beaming with pride, show their achievements on long tables spread with dainty clothes or well-prepared articles of food. There are among the garments all sorts of underwear and even white and colored gowns, handkerchiefs and bags, pieces of fancy work and piles of table linen made with stitches, perhaps not so fine as those of the experienced sewing woman, but exhibiting earnestness and patient effort. Or the tables may be spread with loaves of white bread, cakes, pies and other dishes, showing the work of the cooking course. They look delicious and are evidences of eagerly-learned lessons.

The most evident suggestion to be derived from the professional sewing school is its system. The child is instructed at regular hours, not according to seasons of her own moods; and in adapting herself to a system, she receives valuable moral discipline. There exists much prejudice against the old-fashioned "stent," but its revival would doubtless be beneficial in many families; and with all its irksomeness, it is more desirable than an unsystematic way of working. Another admirable professional feature

is order with cleanliness. Each child has her own scissors, thimble and other sewing utensils, and a bag in which her work is placed, so that she need not borrow from others nor complain of losing her materials; and she is obliged to have clean hands and asked to wear a white apron. There is method in the course of instruction, so that the pupil may progress naturally and gradually. It is found profitable to begin with making a bag, since that work combines many kinds of sewing, such as hemming, sewing "over and over," running, and even button-hole making. From the bag as a foundation, the pupil is led gently and patiently through many kinds of work, until at last she is able to perform the great result of making a shirt for father or a suit for the little brother. The most valuable lesson learned is that of self-reliance, one in which home training is apt to be particularly deficient. The sewing teacher requires her pupils to do their own basting, thread their needles, make their knots, and feel a responsibility for their work; but the mother sometimes lacks the patience necessary for insisting upon these duties. There is nothing sweeter than the mother and her little daughters engaged upon the same pleasant occupation in which the one acts as instructor to the others. No school training can equal this communion, for home love and confidence are being developed during the hour of sewing; and many lessons are learned besides stitches. The more valuable it becomes, when, with the home influence, is added a scientific knowledge of the subject.

Cooking schools give many suggestions to family instruction. The little cooks in white caps and aprons are given receipt books and little memoranda; each has attached to her belt a holder for removing kettles from the fire and a clean cloth for wiping dishes. A carefully arranged system of instruction, partly adapted from that in the English schools, enables the pupil to learn all grades of her department from making a fire to preparing a difficult *entree*. When a girl cooks at home, she is apt to make cake and charlotte russe and salads with nicety and to neglect plain cooking; but a scientifically instructed pupil begins first with soup-making and then learns the way to make bread or breakfast rolls, to broil steak, to prepare oat-meal and other cereals and to cook a plain dinner. She has an intelligent appreciation of her work, for she understands the chemical properties of food and the cost of each article; she cooks with neatness, accuracy and daintiness. With thought and care, the home cook with even better opportunities, might attain equal skill.

—Good Housekeeping.

Contagious Diseases.

Scarlet fever, a contagious disease producing a large annual mortality, is, says Dr. G. A. Collamore, produced by a specific poison which emanates from the person of the patient, and can be caused by no other means, and this poison is remarkable for the tenacity with which it affixes itself to objects, which, if portable, may convey it long distances, and for its tenacity of life, which renders it difficult to destroy. Diphtheria, also a contagious disease, and largely fatal, may also arise from other causes than contagion, notably from fermenting filth, and requires, not only isolation, but cleanliness, for its extinction. Typhoid fever and Asiatic cholera, while not directly communicable from person to person, are spread by the dejects of their victims, which contaminate the water supply, and thus an efficient disinfection of these dejects is a very desirable thing to accomplish. Smallpox may be exterminated by vaccination, and this, I am happy to concede, is a fact on which the public requires less information than most others, albeit there are skeptics here. It is evident if the public knew how diseases arise and are disseminated, it would be prepared to more heartily and effectually second the endeavor of sanitarians to limit and subdue them. In proportion to its knowledge of sanitation would its zeal increase.

No Carpets in Summer.

Carpets, curtains, lambrequins, etc., may be deemed necessary parts of house furnishing, but they all collect dust and dirt of a more dangerous character. In the winter they may be tolerated, but when summer comes they should all be removed to places of security and protected from light and in-

sect destroyers. The floors should be oiled with boiled linseed oil, and whenever coverings of any kind are desirable, on account of lessening sounds, rugs and mats should take the place of carpets and plain shades and shutters will suffice to exclude too glaring a light and diminish the dust nuisance. Floors thus treated are kept clean much easier, as the oil becomes incorporated with the wood and makes a hard finish, as it is oxidized by contact with the air. The same treatment of floors, removal of carpets and unnecessary materials for the lodgment of dust and organic impurities will make the sleeping apartments much more wholesome. It has long been acknowledged that carpets are entirely out of place in the apartments occupied by the sick, that they retain the poison of such diseases as smallpox, diphtheria and scarlet fever; and it seems strange that a crusade against them has not been long since organized. In the far-off future, when people shall have learned a moderate amount of sanitary knowledge, "the carpet must go."—*St. Louis Globe-Democrat.*

Schools on the Continent.

Germany stands ahead of all other nations in the excellence of its primary and secondary schools. The well-known Realschulen, many of which now comprise ten classes and are co-ordinate with the gymnasia, afford an education which is perhaps the best possible general preparation for commercial or trade pursuits. In these schools the classical languages are not taught and the time thus saved is devoted to modern languages and science. In addition schools of commerce are found in nearly all the large towns of Germany. There are certain differences between the systems of commercial education and indeed of education generally as adopted in Bavaria, Saxony and Prussia. The mercantile schools are well attended and they are practically independent of government aid. Several of the real schools have a commercial department, but besides these there are in Germany seven-teen special schools of commerce, the leaving certificate of which is recognized as conferring the right of one year's military service; nine middle schools with a less extended curriculum, and a large number of evening schools, which are attended by clerks, merchants' apprentices, and other persons engaged in mercantile houses. With the view of meeting the requirements of young men who desire to attend special courses of instruction on commercial subjects some of the polytechnic schools of Germany have arranged courses of lectures, which are intended for those who are seeking places under the government in the customs and excise offices, but are followed by other students who have received their early education at a gymnasium or realschule and whose circumstances enable them to spend a year or two at college before commencing business.

In Austria-Hungary there are nine high schools of commerce, eleven intermediate schools, and forty-two schools intended principally for clerks. There is nothing that calls for special notice in the subjects of instruction in these schools. The course of study is very similar to that in the corresponding schools of Germany. The most important of the high schools is in Vienna and is known as the Handels akademie. It gives two courses of instruction, the one occupying three years and the other two years. The subjects of instruction are nearly the same as those of the French high schools.

In Italy the subject of commercial education is receiving careful attention. The system of bifurcation commences immediately after a child has the elementary school. Those intended for industrial pursuits pass on to the technical school (*scuola tecnica*) and thence to the technical institute. Others pass through the corresponding classical schools to the university. The technical institute corresponds to some extent with the higher real schools of Germany, but each institute contains three or more separate departments, in which the institution is specialized with a view to different branches of industry. There are sixty-five technical institutes in Italy, in many of which there is a department entirely devoted to commercial education.

In Belgium there are numerous middle schools, the object of which is to prepare youths for commercial pursuits. The fact that the children of the middle classes are destined, for the most part, to learn their

\$85 SOLID GOLD WATCH FREE!

This splendid solid gold hunting-case watch, is now sold for \$85; at that price it is the best bargain in America; until lately it could not be purchased for less than \$100. We have both ladies' and gents' sizes with works and cases of equal value. ONE PERSON in each locality can secure one of these elegant watches absolutely FREE. These watches may be depended on, not only as solid gold, but as standing among the most perfect, correct and reliable timekeepers in the world. You ask how is this wonderful offer possible? We answer—we want one person in each locality to keep in their homes, and show to those who call, a complete line of our valuable and very useful HOUSEHOLD SAMPLES; these samples, as well as the watch, we send ABSOLUTELY FREE, and after you have kept them in your home for 2 months, and shown them to those who may have called, they become entirely your own property; it is possible to make this great offer, sending the Solid Gold Watch and large line of valuable samples FREE, for the reason that the showing of the samples in any locality, always results in a large trade for us; after our samples have been in a locality for a month or two, we usually get from \$1,000 to \$5,000 in trade from the surrounding country. Those who write to us at once will receive a great benefit for scarcely any work and trouble. This, the most remarkable and liberal offer ever known, is made in order that our valuable Household Samples may be placed at once where they can be seen, all over America; reader, it will be hardly any trouble for you to show them to those who may call at your home, and your reward will be most satisfactory. A postal card, on which to write us, costs but 1 cent, and if, after you know all, you do not care to go further, why no harm is done. But if you do send your address at once, you can secure FREE, AN ELEGANT \$85, SOLID GOLD, HUNTING-CASE WATCH and our large, complete line of valuable HOUSEHOLD SAMPLES. We pay all express freight, etc. Address, STINSON & CO., Box 101 Portland, Maine.

livelihood in trade or commerce is recognized in the general scheme of intermediate education adopted in Belgium, and the course of school studies is arranged accordingly.—*Philip Magnus, in Contemporary Review.*

Let the Boys Do Housework.

In my opinion there is nothing degrading for a man or boy to don a big apron, and with strong arms assist the tired and often overworked wife or mother in the heavier work of the household. My mother's girls "were all boys," and I, the youngest, was often called to help her with the housework. I have lived to bless her for the instruction she gave me in that line, and I know my wife is of the same mind. I remember one day when I was helping at the washtub, our pastor called and took occasion to ridicule me for the work I was doing. He said, "I won't wash." I was a boy, but my estimation of him fell several degrees at that time. I know a man who, when his wife was sick, and no help could be had for love or money, took the whole care of the household as nurse, cook, washerwoman and maid-of-all-work for several weeks, unaided except for the daily visits of the physician, caring for his wife as she went almost to the gates of death, until at last a good nurse was obtained and the tired husband was permitted to rest. So, boys, don't be ashamed to help your mother and sisters in the house if your help is needed. The knowledge you will get may serve you a good turn some day, and you can feel that you have done what you could to lighten the cares of a self-denying mother.—*A. B. C., in Farm and Home.*

To dream of a ponderous whale,
Erect on the tip of his tail,
Is the sign of a storm
(If the weather is warm),
Unless it should happen to fall.

Dreams don't amount to much anyhow. Some signs, however, are infallible. If you are constipated, with no appetite, tortured with sick headache and bilious symptoms, these signs indicate that you need Dr. Pierce's Pleasant Purgative Pellets. They will cure you. All druggists.

ROYAL



BAKING POWDER

Absolutely Pure.

This powder never varies. A marvel of purity, strength and wholesomeness. More economical than the ordinary kinds, and cannot be sold in competition with the multitude of low-test, short-weight alum or phosphate powders. Sold only in cans. ROYAL BAKING POWDER CO., 106 Wall street, New York.

The Young Folks.

A Dear Little Sohemer.

There was a little daughter once, whose feet were—oh, so small!
That when the Christmas Eve came 'round, they wouldn't do at all.
At least she said they wouldn't do, and so she tried another's,
And folding her wee stockings up, she slyly took her mother's.

"I'll pin this big one here," she said—then sat before the fire,
Watching the supple, dancing flames, and shadows darting by her,
Till silently she drifted off to that queer land, you know,
Of "Nowhere in particular" where sleepy children go.

She never knew the tumult rare that came upon the roof!
She never heard the patter of a single reindeer hoof;
She never knew how Some One came and looked his shrewd surprise
At the wee foot and the stocking—so different in size!

She only knew, when morning dawned, that she was safe in bed.
"It's Christmas! Ho!" and merrily she raised her pretty head;
Then, wild with glee, she saw what dear old "Santa Claus" had done,
And ran to tell the joyful news to each and every one.

"Mamma! Papa! Please come and look! A lovely doll, and all!"
And "See how full the stocking is! Mine would have been too small.
I borrowed this for Santa Claus. It isn't fair, you know,
To make him wait forever for a little girl to grow."
—St. Nicholas.

What then remains but well our power to use,
And keep good humor still, whate'er we lose?
And trust me, dear, good humor can prevail
When airs, and flights, and screams, and scolding fall.
Beauties in vain their pretty eyes may roll,
Charms strike the sight, but merit wins the soul.
—Pope.

Let fortune empty her whole quiver on me,
I have a soul, that like an ample shield,
Can take in all, and verge enough for more.
Fate was not mine; nor am I Fate's;
Souls know no conquerors.
—Dryden.

To me the meanest flower that blows can give
Thought that too often lies too deep for tears.
—Wordsworth.

ABOUT SOME GIANTS.

The recent death of Mrs. Anna Swan Bates, "The Nova Scotia Giantess," as the show bills had it, has set the curious to speculating once more on the cause of such freaks; but science has no satisfactory explanation. Of course there are tall races of men, and in some families there is a hereditary tendency towards a height of six feet or thereabouts; but "giants" proper are pure "freaks," and in very many instances their parents are below the average height. Anna Swan's father was but 5 feet 7 and her mother 5 feet 5, while the mother of her husband, Captain Martin Van Buren Bates, was an unusually small woman, and his father only a good average Blue Grass Kentuckian. Mrs. Swan Bates was of Scotch blood, born in Nova Scotia in 1848, and was big from the start; when full grown she was 7 feet 7, and as kind as she was big. She and her husband were highly respected at Seville, O., where they lived.

Every boy's memory is stored with tales of "bloody giants," such as "Bugaboo Bill" and the fellow that Jack-the-giant-killer slew; and all the mythology of early peoples is full of fancied stories of similar nature. In reality giants are the most peaceable of mankind, and very big women are almost always timid and tender-hearted. It raises a smile to think of a sighing sentimental maiden weighing 500 pounds; and the paragrapher has exhausted himself in witty calculations as to the length of time it takes a tender emotion to travel from the heart to the frontiers of her person. But it is anything but funny to the subject. She loves often with an ardor corresponding to her size; and pursuant to the usual perversity of nature, she is apt to love a small or average sized man. Many instances are on record of the marriages of such oddly assorted couples; and well it is that these gigantic ladies are tender-hearted, for a matrimonial row with such a one is not to be thought of without a shudder.

The Greeks have given us the prettiest stories about giants; how they made war on the gods and flung mountains at them; how they were imprisoned under Aetna and struggled until the volcano overflowed; how some of them forged thunderbolts for Jupiter, and how old Cyclops, the meanest of the lot, was made drunk and had his only eye jabbed out by Ulysses. They also gave

us the name gigantess, meaning "born of the earth," as they were supposed to be gendered by the blood of Uranus falling on a fertile soil. It is quite likely the Greeks got these notions from fossil bones, just as millions of modern people have found "giant bones." This notion that men were formerly of immense stature is among the most persistent of popular delusions. Several years ago a showman traversed the west with the skeleton of a "mylodon robustus," seated in an immense chair and surmounted by a hideous human skull (fashioned out of plaster for the purpose) and set with frightful glass eyes; and with it he exhibited the certificates of "several eminent surgeons" that it was a veritable human skeleton. The sight of it made even a stout man shudder, and it was no doubt responsible for thousands of nightmares.

There is no proof that there ever was a man ten feet high, but a few have reached nine feet, and many have exceeded eight, while in every age of which we have record there have been women weighing over 500 pounds. Captain Bates, husband of the recently deceased lady, is eight feet high, yet he served through the war in the Confederate cavalry, and was thoroughly "reconstructed" without a special act.

Herr Winkelmeir, of Austria, is now the largest man in the world—if that "9 foot giant in Africa" is a myth—being 8 feet 9 inches, with unnaturally long arms, their reach being 10 $\frac{1}{4}$ feet. He was of average size till the age of 14. Mrs. Emma Markley, of Philadelphia, weighed 580 pounds; her coffin was 8 feet long, 4 feet deep, and 45 inches wide, and as no hearse in the city could transport it to the cemetery ten strong men did that service. She was a delicate girl and at 19 weighed but ninety pounds. She was notably kind and devoted to charitable deeds.

"Twenty-three feet and nine inches of Robinsons" was lately one of the attractions at Knoxville, Ia., three brothers of that name being each 7 feet 11 inches high. "The marriage of the fat woman and the Albino" drew a big crowd to a New York dime museum some years ago; she was Maud Pettit, of Tyrone, Ireland, who weighed seventeen pounds at birth and 580 at maturity. The certificate was written with his toes by the "armless man;" the "horned man from Africa" and the "wild boy of Mexico" stood as next friends, and the "living skeleton" enlivened the occasion with some of his venerable jokes. The wedding ring was bracelet size for the "snake charmer." Eight women were collected in Chicago, in 1885, whose joint weight was 4,028 pounds, the largest and probably the heaviest in the world being Mrs. Hannah Battersby, weighing 728 pounds.

Scripture tells us of whole races of giants—Nephilim, Anakim, Rephaim, Emim, Euzim, etc.—but no figures are given. Enough is told, however, of Og, king of Bashan, to show that he was a "stunner," and Goliath's height was "six cubits and a span"—9 feet 9 inches. Aside from these, who excited as much attention then as they would now, it is conclusively proved that the average height of Egyptians and Israelites then was a little below that of Americans to-day, and such of their tools and weapons as remain indicate that they were not so strong as modern races.

In conclusion it can only be repeated that of giants and dwarfs, fat women and living skeletons, science has no explanation. The parents are but average, and while attaining their growth giants are usually quite feeble, if not sickly. Captain Bates especially suffered a great deal in "growing up." In their mental and moral nature fat women do not differ from the rest of their sex. Mrs. Swan Bates was a devout Christian, an excellent scholar, fond of congenial society and very charitable.

"There is a divinity that shapes our ends,
Rough hew them as we may."

No close observer of human affairs can gainsay the poet as above quoted. The close observer aforesaid must have noted, however, that there are many persons who seem to think that their ends will be shaped without any "rough hewing" on their part. How much nobler is it for young men to strike boldly out to build well their own characters under God's guidance. To all who aspire to do a good work and do it well, we say write to B. F. Johnson & Co., 1009 Main St., Richmond, Va., who will give you helpful suggestions.

Loot HERE, FRIEND. Are you Sick?

Do you have pains about the chest and sides, and sometimes in the back? Do you feel dull and sleepy? Does your mouth have a bad taste, especially in the morning? Is there a sort of sticky slime collects about the teeth? Is your appetite poor? Is there a feeling like a heavy load on the stomach, sometimes a faint, all-gone sensation at the pit of the stomach, which food does not satisfy?

Are your eyes sunken? Do your hands and feet become cold and feel clammy? Have you a dry cough? Do you expectorate greenish colored matter? Are you hawking and spitting all or part of the time? Do you feel tired all the while? Are you nervous, irritable and gloomy? Do you have evil forebodings? Is there a giddiness, a sort of whirling sensation in the head when rising up suddenly? Do your bowels become costive? Is your skin dry and hot at times? Is your blood thick and stagnant? Are the whites of your eyes tinged with yellow? Is your urine scanty and high colored? Does it deposit a sediment after standing? Do you frequently spit up your food, sometimes with a sour taste and sometimes with a sweet? Is this frequently attended with palpitation of the heart? Has your vision become impaired? Are there spots before the eyes? Is there a feeling of great prostration and weakness? If you suffer from any of these symptoms, send me your name and I will send you, by mail,

One Bottle of Medicine FREE

Send your address on postal card to-day, as you may not see this notice again.

Address, naming this paper, Prof. HART, 212 E. 9th St., N. Y.

EMPORIA BUSINESS COLLEGE

EMPORIA KANSAS.

PROF. O. W. MILLER, : : : PRESIDENT.

TOPEKA STATE SCHOOL OF ORATORY.

NEXT YEAR OPENS OCTOBER 3. FULL COURSE, TWO YEARS. PUPILS THOROUGHLY FITTED TO TEACH ELUCUTION OR TO GO UPON THE STAGE. CAREFUL ATTENTION GIVEN TO ORATORY. PARTIAL COURSES MAY BE TAKEN AT ANY TIME. PRIVATE LESSONS GIVEN WHEN DESIRED. SEND FOR CATALOGUE.

Address

C. H. PUFFER, TOPEKA, KANSAS.



BETHANY COLLEGE.

Under care of the Protestant Episcopal Church. For GIRLS AND YOUNG LADIES, exclusively. Boarding and Day Pupils.

Twenty-six Officers and Teachers.

Faithful Maternal oversight for all entrusted to our care. ALL BRANCHES TAUGHT—Grammar and Colloquy, French, German, the Classics, Instrumental and Vocal Music, Elocution, Drawing, Painting.

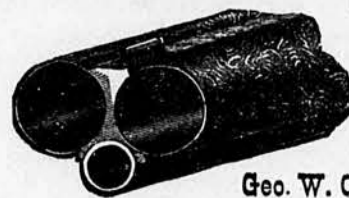
THE MUSIC DEPARTMENT—Employs ten teachers, and twenty-four pianos and three organs.

In the ART DEPARTMENT, the Studio is well equipped with casts, models and copies. Send for Catalogue to T. C. VAIL, Bursar, or Bishop T. H. VAIL, President, Topeka, Kansas.

Our New Combination Shot Gun and Rifle.

We have the best three barrel combination gun made. A double Beech-load for \$9.50 We want to place one of these \$9.50 guns in every town and offer a sample free. OUR EMPEROR GUNS are unsurpassed and the best value in the market. If in want of Guns, Rifles, Waltham Watches or Sporting Goods send us your Address and no matter where you live OUR MAN ON THE ROAD will call on you. Agents for the Peters Shot Gun Cartridge

Geo. W. Clafin & Co., 54 & 56 Duane St., New York



KANSAS FARMER.

ESTABLISHED IN 1893.

A TWENTY-PAGE WEEKLY,

Published Every Thursday by the

KANSAS FARMER COMPANY.

OFFICE:

KANSAS FARMER BUILDING,
Corner Fifth and Jackson Sts.

S. J. CRAWFORD, - - - - - PRESIDENT.
J. B. McAFEE, - - - - - VICE PRESIDENT.
H. A. HEATH, - - - - - BUSINESS MANAGER.
W. A. PEPPER, - - - - - MANAGING EDITOR.

SUBSCRIPTION PRICE:

ONE DOLLAR A YEAR.

An extra copy free one year for a Club of six, at \$1.00 each.
Address KANSAS FARMER CO.,
Topeka, Kansas.

ADVERTISING RATES.

Special notices 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.
Annual cards in the *Breeders' Directory*, consisting of four lines or less, for \$15.00 per year, including a copy of the *KANSAS FARMER* free.
Responsible advertisers may contract for display advertising at the following net rates:

	One inch.	Two inches.	Quarter column.	Half column.	One column.
1 week . . .	\$ 2 00	\$ 3 50	\$ 6 50	\$ 12 00	\$ 20 00
1 month . . .	6 00	10 00	18 00	35 00	60 00
2 months . . .	10 00	18 00	30 00	55 00	100 00
3 months . . .	14 00	25 00	40 00	75 00	125 00
6 months . . .	25 00	45 00	75 00	135 00	225 00
1 year	42 00	75 00	120 00	225 00	400 00

All advertising intended for the current week should reach this office not later than Monday.
Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders,
KANSAS FARMER CO.,
Topeka, Kas.

The quantity of corn raised in Kansas this year will be enormous.

Old wheat is selling at 75 to 80 cents in Saline county Mo., so a correspondent says.

Secretary Sanborn reports that August was a favorable month for fall crops in Missouri.

The Missouri State Horticultural Society proposes to have a grand display at the St. Louis exposition.

A reader inquires the name of the inquirer about horse-raising. We do not remember it, but he will be at the State Fair.

Kaw Valley District Fair will be held at St. Marys, September 26 to 28, inclusive. We acknowledge receipt of complimentary invitations. We will try and run up one day at least.

The Ohio State Horticultural Society will hold three sessions during the time of the centennial exposition at Columbus. For particulars address Geo. W. Campbell, Secretary Delaware, Ohio.

The Nebraska *Farmer* appeared last week with an attractive head. We value our contemporary highly, and now that it has a new and good head on, we may expect still better things in its columns.

The President's letter of acceptance appeared in the morning papers of Monday. It is a very long document, leaning to protection as well as to revenue. We will give extracts from it as soon as we get General Harrison's letter.

In order to encourage the breeding of improved Berkshires in the several States in the union, the American Berkshire Association offers a medal of pure coin silver to the owner of the best recorded Berkshire sow bred in any given State and exhibited at the Illinois State Fair in 1888.

THE STATE FAIR.

Kansas ought to have the best fair this year that she ever had. Our farmers the last two years were not generally blessed by heavy crops, but this year, the condition is generally good, and a fine display in the different departments at the fair will be encouraging to us and satisfying to strangers who will be with us at that time.

Aside from the exhibits of produce, stock and machinery, the management has been very active and zealous in securing special features for the entertainment and amusement of the people in the way of music and art. Kate Putnam's famous silver cornet band, composed wholly of ladies, will be on the grounds every day furnishing choice music for the people. A great many fine paintings, drawings, and other artistic displays will be exhibited in the fine art department. The officers have been busy some months in arranging for an aggregation of attractions not surpassed heretofore.

Several Harvest Home excursions from the East are expected during the week, made up of persons who want to see Kansas products and Kansas people.

The management feel encouraged at the prospect. Every inch of available space has been engaged, we are informed, and large numbers of people from a distance have promised their attendance. Let Kansans strain a point, if necessary, to make this year's fair beat all its predecessors in exhibits, quality of products and in the educational influences of the fair. The opening day is next Monday, the 17th, continuing all week. There need be no fear of difficulty about sleeping accommodations. Topeka has stepped out of her swaddling clothes. Hotels and boarding houses are able to take care of any sized crowd which may be here. And there are two lines of street railway to the grounds, the cars passing given points every few minutes, and we have hacks for persons who cannot wait for the car.

CONGRESSMAN TURNER AND THE RAILROADS.

Some time ago, Hon. E. J. Turner, who represents the Sixth Congressional district, in reply to a letter written by the editor of the *Phillipsburg Herald*, expressed himself quite fully and clearly on some phases of the railroad question. The letter was published, and we have had it among our clippings for future use several weeks. Let it be remembered that Mr. Turner was Secretary of the Board of Railroad Commissioners a few years. Here is an extract from his letter:

While with the Board of Railroad Commissioners I learned much of railroad manipulation and the injustice that they were constantly doing the people, and in every speech I made, I urged three changes in the present law of our State and commended them to members of the Legislature. First, in order to make the Board of Railroad Commissioners efficient servants of the people, they should be given plenary power to establish freight rates; second, repeal the law granting municipal corporations the power to subscribe for stock; third, pass a law limiting the bonded liability of a railroad to \$15,000 per mile. The present average indebtedness, per mile, of the roads of our State is \$54,905.39, when every mile can be built and equipped for \$15,000 per mile, and those which were built during the war could not have cost over \$20,000 per mile; the difference between these amounts and \$54,905.38 represents the watered stock and bonds of these roads, and the people for all time to come are obliged to pay a tariff sufficiently high to pay the operating expenses, taxes and interest on the indebtedness of \$54,905.38 instead of \$15,000 per mile. They plead that the laws of our State have allowed them to create the indebtedness by not limiting their liability, and, as you cannot legislate to interfere with vested rights, our people must continue to pay for all time to come this unnecessarily and viciously high tariff; but had such limitation been made by the last Legislature nearly one-half of the mileage of the roads in the State would be subject to its provisions and lower tariffs upon these roads would have forced the same reductions upon all. Notwithstanding the full discussion I gave this question, not a single bill was introduced to accomplish either purpose except the second and that reduced the amount from \$4,000 to \$2,000 per mile.

Attention is called to Mr. Turner's

views for the purpose of commending some things which he thinks ought to be done and also to suggest that it is not all incumbent on the people to pay rates of freight and passenger fare on the basis of watered stock. No matter what may appear on the books of a railway company as the amount of its capital stock, the people need pay only a reasonable compensation for the service rendered, and the capital stock may or may not be helpful in determining what is reasonable compensation. One cotton mill or a woolen mill may have cost twice as much as another, but that cuts no figure in establishing rates in the market. If railroads do not cost more than \$15,000 a mile in Kansas, the people need not pay on a \$54,000 basis. Compensation to an ordinary freighter over common highways is not based upon the cost of his wagon and team. Certain rates on certain routes are paid, and no account taken of the value or cost of the outfit.

Nor do we believe the Commissioners should be empowered to fix rates; that is a legislative act and ought to be performed by the Legislature in due form, but the Commissioners ought to have authority to enforce the law.

The Flour Trust.

Everything seems to be running to trusts nowadays. The *Chicago News* thus describes the flour trust: The object of this trust is admitted to be to keep down the price of wheat and to keep up the price of flour. The great mills of the country, as we have heretofore pointed out, have been selling flour in Great Britain cheaper than in the United States. The purpose of shipment is to keep up prices in the home market by getting rid of the surplus product. The millers assert that they are compelled to this course in order to mill at a profit; it would be better for them to sell, for example, every third barrel abroad at, say, 50 cents less than the home rates if thereby they may charge 50 cents apiece more for the other two barrels. They also charge that grain gambling forces them to it. Naturally the millers resort to the overshadowing trust system in order to protect their industry. How it is with them just at present may be gathered from the circumstance as stated by Miller Cole, of this city. He says: "If flour made out of grain bought on today's (Saturday's) market was shipped to England it would cause a loss to the miller of from 40 to 50 cents a barrel." He adds: "The idea is this, that if we pay fictitious prices for wheat, we must have a fictitious price for flour." This is, in a nutshell, why the trust is necessary for the millers. By the trust they will be able to get their wheat from the farmers at their own terms and sell their flour to the public also on their own terms. Now, what do the farmers and the consumers respectively think of such a prospect as this? It is simply a proposal to buy wheat and sell flour in the United States at purely fictitious prices.

Dr. Oyster, of Miami county, writes a few crop notes for the *FARMER*. He says: "The writer made a trip by buggy to Crawford county, a distance of about 100 miles, going through Linn and Bourbon counties. Many fine fields of corn were noticed. There will be more corn raised in eastern Kansas this year than in the two previous years combined. Corn-cutting commenced here this week. The trip here mentioned was made last week, and not more than fifty shocks of cut up corn was noticed on the entire route. The prairie hay is a fine crop. After all, Kansas is equal to any other State, considering her age."

Agricultural Schools: Their Objects, Methods, and Equipments.

On the 11th day of July, President Fairchild, of the State Agricultural college, presented a paper with the above heading, before the council of the National Educational Association at San Francisco. The address was printed in the last August issue of the *Industrialist*. The readers of the *KANSAS FARMER* will soon have the pleasure of seeing it in this paper. It is a paper prepared by a competent man.

Odd in This Country.

A Marion county man, acting as agent, recently served a copy of the following notice upon all the grain buyers in that county, so we see from a newspaper clipping sent us:

OFFICE OF F. W. FOX, AGENT FOR WM. J. SCULLY, ESQ., MARION, KAS.,—, 1888. [

To—, Sir:—I herewith below present you a list of tenants of Wm. Scully, and beg to notify you that their crops are subject to Wm. Scully's lien for rent, and that you must not pay them for any crops or parts of crops until such rent is paid, or I shall be obliged to hold you responsible therefor.
Respectfully, F. W. Fox, Agent.

That sounds odd, yet it is according to law "in such cases made and provided." Crop rent is in effect a chattel mortgage.

Early Seed Corn.

We are in receipt of a letter from Mr. E. H. Ribbel, Superintendent of Tullehassa Manual Labor School, Creek Nation, discussing the seed corn question. He had experience in Kansas as well as in the Nation, and he sums up the result of his observation in these words: "It is my opinion that the early seed, planted early, will win every time." Then he describes their method of raising a crop of corn on the school farm. He says: "We raised about forty acres of corn on our farm this season. Nearly all the ground was plowed in the fall. We planted the first sixteen acres March 15-17 and finished the balance by March 30. We planted four varieties of corn, all early and of medium growth of stalk. We have a good crop of sound corn. On the 4th of July we had good roasting ears in the first planting, and we have found it a great help to have this corn for feed as old corn was very scarce."

Our Dairy Interests.

The following letter is important, and we hope every Kansas dairyman or dairywoman, old or young, will read it, study it and act upon it:

TOPEKA, September 10, 1888.

MR. EDITOR:—At the Dairy department in Agricultural Hall during the week of the State Fair, a suitable register will be provided for the benefit of dairymen who may attend, and all interested in dairying are requested, as soon as they arrive upon the grounds, to register, giving name, postoffice address, and location during the fair. By this means we can find each other and be able to get together and hold a meeting in our dairy interest during the fair. The executive committee of the Kansas Dairy Association will hold a meeting on Thursday, at 10 o'clock a. m. The place of meeting will be made known at the Dairy headquarters. We trust that all who can will come to the fair and bring their dairy products with them.

JOHN G. OTIS,
President Kansas Dairy Association.

How to Get a Useful Little Book for Nothing.

For a limited time we make the following offer: To every one of our readers who will send us the name of one NEW yearly subscriber and one dollar, we will send one copy of "PEPPER'S TARIFF MANUAL."

We are requested to express regrets of F. W. Truesdell, who, by reason of sickness in his family, was prevented from attending the State Fairs of Iowa and Nebraska to act as Judge in the Poland-China department of the swine exhibit.

That Bread.

The Superintendent of Division G in premium list of the Kansas State Fair requests parties making entries of bread, cakes, etc., to bring their display to the building on Tuesday morning, the 18th inst.

A correspondent writes that about 15,000 people attended the Wichita exposition and fair last week. He says "the principal feature of the fair was the races. Good horsemen claimed the finest show of thoroughbred stock ever shown in the State, and the races were said to be fine, indeed."

The Commissioner of Agriculture at Washington, D. C., is now purchasing cocoons of the crop of 1888. Persons having any for sale should communicate with him at once and obtain a circular relating the terms of purchase. If you have not yet applied for silk worm eggs for 1889 do so at once so that your application may not arrive too late.

A national convention of farmers is called to meet in the city of New York at 12 o'clock m., Tuesday, September 25, "to consider the tariff question." The subject will be debated by the ablest men, on both sides. All associations of farmers are entitled to delegates. For particulars address Forrest K. Moreland, Secretary American Agricultural and Dairy Association, 57 Broadway, N. Y.

Greeley county is the middle county on the west line of the State. Here are a few facts about the weather there during August, reported by S. B. Jackson, of the Kansas weather service: "Temperature—mean 72.6 deg. Mean from maximum and minimum, 72.7 deg. Minimum of month 49 deg. on 21st. Precipitation—total 1.20 inch. August has been marked with numerous local showers, cool and cloudy with an unusual amount of fog and misting weather with light winds. Farmers have their fall work well in hand."

A correspondent writing from Conway Springs, McPherson county, says: "I would say a word about land mortgages of the township. I cannot give an estimate, but of our school district, containing nine sections, thirty-six quarter sections—nine quarter sections are clear, that I know of, and there may be more; and the largest mortgage is \$900, but most of them are \$500. I think \$600 would be about an average for the mortgaged land in this district. I do not claim to state the exact amount of indebtedness. I think there are four more quarters clear, but am not sure. I think your estimates is very nearly correct."

In another place will be found a letter from Mr. Otis, President, and another from Mr. Stokes, Secretary of the State Dairy Association; which we commend to the careful attention of every person in Kansas who is interested in dairying. The dairy interest here is in its infancy and it needs looking after. As the State grows older our farmers will devote more attention to dairying because it is more profitable than raising grain to sell. It is easier and more profitable to market milk, butter or cheese than it is to market wheat, corn and hay. Kansas dairymen made a good beginning by organizing a State association. The fair will afford opportunity for meeting of the members, getting better acquainted, and talking over things yet to be done.

Twenty-eight Years in Wall Street.

This is the title of a book recently given to the public by Irving Publishing company, New York city. It was prepared by Henry Clews, of the banking house of Henry Clews & Co. No man is better equipped for a work of this character than Mr. Clews, and we do not see why the book should not receive a very warm reception, for the reason that Wall street has come to be the money center of this continent and is bound to be some day the money center of the world.

Mr. Clews is specially prepared for the work because of the rule and practice of his banking house that none of the partners shall under any circumstances embark in any speculative enterprise. He has not, therefore, been mixed in any of the Wall street scandals, and he can relate what he knows without breach of confidence. What he knows about Wall Street and the practices there is just what the people want to know, and it is said that in this book he does tell all he knows on that subject which is worth telling.

We have not yet seen the book, but are willing to say in advance that the subject treated and the strict business integrity of the author are guarantees that the work will be well worth reading by every student of monetary affairs. Persons wishing particulars about the book should send to the publishers for a prospectus.

Preserving Sweet Potatoes.

A friend writes to inquire about raising and the after care of sweet potatoes. Several important points about this vegetable must be kept in mind by farmers. They are sensitive in every respect, as to changes of temperature, moisture and handling. A light frost will endanger the keeping qualities of sweet potatoes, exposure to any kind of weather in the open field is not good, and especially to wet weather. They will lie on a floor that is inclosed and roofed a long time without injury, if they are put there without bruising, and if the pile is not deep, and if the temperature does not get near the freezing point. They must not lie long in the sun, they must not lie long in the wet, they must not lie in the cold.

The vines ought to be loosened up occasionally so that they do not take permanent root along the rows, and as soon as the potatoes are matured they should be raised. This must be done before the late fall rains and before heavy frosts come. A frost that will kill the vines will not affect the potatoes unless it also freeze the soil. But when the early frosts come, then get the sweet potato out. To raise them, use implements to accord with the quantity. If there are but few and if they can be raised in a day or two by hand, use a large, strong steel hoe. If the ground is large enough to require a faster method, use a plow or digger as, if you were raising Irish potatoes. A wide and deep single-shovel plow is good, because it does not break or cut as many of the potatoes as a plow with sharp points about it. Never leave out over night what you raise during the day. Pick those which are to be preserved over winter as carefully as winter apples are picked, and put them in a dry, cool place that is well secured against rain and frost. Dry ground makes a good floor, provided it is so protected as to be free from effects of rain or cold on the outside. The pile must not be deep—a foot in depth is enough during the warm weather of the fall months; it might be made deeper late in December, when the potatoes are picked over and all damaged ones are thrown away.

Such as are skinned or bruised or

broken or cut during the process of raising should be kept by themselves and used as fast as needed. They won't keep long. The smaller potatoes, if they are sound and well matured, those say one inch or one and a half inches in diameter should be saved at the first picking for seed. Our experience is they are quite as good as large ones.

For keeping them through the winter, store-boxes and old barrels will do for small quantities. But they must be made absolutely frost-proof. They should have a little ventilation occasionally. For larger quantities, if one has no bins prepared for the purpose and has not conveniences to prepare them, make a "cave"—a cellar mostly above ground. This can be done with but little labor and no expense beyond a few nails, and lumber enough to make a little door, with two posts and a few strips to lean from the ground to the ridge-pole, on which to lay hay and cover with earth. The two important things about keeping sweet potatoes in winter are, to keep them dry and warm enough to prevent their freezing. Make the arrangements so that fresh air may be passed over them. They are better packed in dry sand, chaff, cut straw or some similar matter. Don't cover them for winter until the season admonishes you; that is to say, keep them in a dry, cool place, until frosts appear, then close them in.

Soil Peculiarities.

Some days ago Mr. H. P. Lowery, writing from Bird City, Cheyenne county, this State, calls attention to some interesting features of agriculture in that part of the State. He says: "Some peculiar facts relative to planting small grain exist here. One farmer sowed his wheat and oats in the latter part of March, while another in the same section and exactly the same soil and condition generally, sowed his wheat about the 23d of April, and his oats May 29. The wheat and oats of the latter person is a splendid crop, as good as there is in the county, while that of the former is much below the average.

During August we had rains very frequent, as often as twice each week, and the grass has remained green and growing. Fall seeding has commenced and the ground is in excellent condition, far better than any previous fall. Experience here has taught us that it pays to plant small grain. It is sure to make a fair crop. Flax has proven a success here. In 1887 Cheyenne county grew corn enough to feed all its stock and spared some. This year we have an abundance of all kinds for home consumption and thousands of bushels to spare.

Furnish us a home market for all our products, and we shall soon become wealthy and contented."

Flowers in City and Country.

EDITOR KANSAS FARMER:—It is a mistaken idea that people in the large cities know more about the culture and varieties of flowers than those living in country or village. City people generally grow more green-house plants, but outside the general name, geranium, petunia or coleus, not one in fifty can give the names of the varieties they grow. As a rule, flower fanciers in the country and village will be able to give the names, as Gen. Grant, Queen of Faries in geraniums; Golden Bedder, Progress, etc., in coleus, and so on with other flowers.

The reason is obvious; the thousands of florists' catalogues that are scattered broadcast over the country rarely fall into the hands of people living in large cities, and when they do, there is little occasion to use them, as they go to the

green-houses and select their plants, or trust the matter entirely to the gardener or florist.

It is a fact that in Kansas City three-fourths of the florists themselves know but little about varieties, and do not pretend to label their stock; they depend on the local trade, and there are so few calls for any particular varieties that they do not go to the trouble of labeling. Visitors want double, or single, dark red, pink or white, but they don't care anything about the varieties.

People who have to order their plants by mail or express acquaint themselves with the various varieties and it seems to me get much more enjoyment out of their plants for that very reason.

There are of course some notable exceptions, for the green-houses are valuable aids to students of botany and flowers, and it is surprising that so much ignorance should exist where so many flowers are grown and used. There are many dishonorable florists who take advantage of this gross ignorance. For instance, orders were daily filled here a few months ago for Marechal Niel roses, when there was scarcely a rose of that variety in bloom, and but few of them grown. The "Perles" answered the purpose and were freely accepted as genuine. The Storm King fuchsia was very plentiful and was sold readily, but in nine cases out of ten a flower closely resembling the noted beauty was supplied—this is not to be wondered at, however, in so new a flower. There are many such little swindles in the local markets on account of the general ignorance of names and varieties.

My advice to every lover of flowers is to make the subjects of names and varieties a study. It should certainly be very embarrassing to be unable to give the names of the flowers you are growing.

A practical course of study in botany would be to master the names, habits, history, etc., of the plants you are growing. Do you know that some flowers have wonderful histories? Look up heliotrope, fuchsia and New Life geranium.
W. O. GRAHAM.

Crops Over in Brown.

Mr. H. F. Mellenbruch, of Brown county, a good farmer, a practical, sensible man, whom the KANSAS FARMER esteems highly as a correspondent, wrote us some crop notes, and our space was so much crowded with similar matter that his letter was set aside for this week. Here it is:

"This season was a blessed one to the farmers of Brown, so far as crops are concerned. July was excessively hot, and dry too, which caused the chinch bugs to multiply to an alarming extent. They hurt the spring wheat, and ruined some of it entirely. Then they went in force for the corn and pastures. But the rains and cooler weather came just in time. August has been all that could be desired. Vegetation has a deep green hue as in May. Pastures very luxuriant. Corn an immense crop, ears growing out of the husk like in 1876, when we had August rains in abundance. All depredations of the chinch bugs have ceased. Oats yield well, fall wheat fairly well (not much grown), spring wheat bad. Considerable rye was grown, and it is a fair crop. Tame hay was good; wild hay excellent. Several farmers think of trying more fall wheat. Some old corn on hand yet; some being hauled off. Much fall plowing being done."

Inquiries Answered.

ORCHARD MANUAL.—Can you tell me through your valuable paper where and how the "Orchard Manual" spoken of by Geo. Y. Johnson, in his address at Holton, can be obtained?

—Write to G. C. Brackett, Secretary State Horticultural Society, Lawrence, Kas.

SCHOOL BOOKS.—I would like for some sharp and posted readers of the KANSAS FARMER to tell me the reason why the poor farmers and laboring people of Kansas are swindled out of nearly half a million dollars a year on school books. The price of school books in Kansas is about double what it was twenty-five years ago. I can't see why we should be taxed by such a devilish school book syndicate? Is there no remedy to break that swindle? Why can't our law-makers step in and stop this swindling business? Everybody is trying to bleed the farmers in Kansas. A corrupt ring at nearly all county seats who want to live by somebody else's labor.

—Our friend is mistaken about the cost of school books; it is not more than it was twenty-five years ago. Books of the same class or grade, and books on same subject by same authors—the same books on geography, grammar, reading, etc., do not cost as much now as they did ten years ago; at any rate, that is true in Topeka, and we presume it is true in all parts of the State. Still, our school books are costing too much, and the Legislature can reduce the cost if it will undertake the work in earnest.

Horticulture.

THE FIVE COMPOUNDS

Of the Organic Elements Essential to Plant Growth.

Paper read by L. A. Simmons, before the State Horticultural Society, at Holton, June 20, 1888.

The growth of all organized bodies, in the vegetable as well as animal kingdom, is the natural result of the consumption of food. Animals generally prepare their food by chewing, for the chemical process of digestion, and then a portion is assimilated and enters into and becomes a part of the living organism. Plants of all orders and species, from the tiniest which attains an inch in height, to the giant oak and redwood, take a portion of their food by the aid of water from the soil by means of their roots, and from the air, by the pores in their leaves and branches, and each by assimilation converts what is needful to its organic constitution. In each case, growth is derived by the transformation of organic, as well as the inorganic or mineral elements, by the force of the life principle into a newly organized form, a living organism composed of the materials assimilated.

In preceding papers I have shown that only about 3 per cent. of the mineral elements derived from the soil enter into the constitution of plants, and that the principal portion, that is, 97 per cent. of all plant food, is composed of the four organic elements, oxygen, hydrogen, carbon and nitrogen, mainly in the natural combinations of oxygen and nitrogen as air, and oxygen and hydrogen as water. In my last paper, I gave a particular description of the organic elements—the three gases, oxygen, nitrogen and hydrogen, and also of carbon (perhaps also a gas), showed how they combined to form liquids and solids, and directed special attention to the two great natural combinations, air and water, not only as plant food, but also as the principal means by which all plant food, mineral as well as organic, is transmitted to, and prepared for entering into the organization of plants. Hence, for several reasons, indispensable to plant, life and growth.

It is my purpose at this time to direct your attention to some of the other, and less universal combinations of the organic elements with each other, by which new substances are formed that are intimately connected with plant growth, and probably as essential to it, as air and water. But first understand, that the combinations of substances are of two kinds, termed mechanical and chemical. In the former the substances remain unchanged except in form and appearance. For example, salt and water combine to form brine, but if the water is evaporated, the salt remains and assumes its original form. Such combinations are properly termed mixtures, for neither element entering into the combination loses by the process any of its distinctive or characteristic properties. In the latter class of combinations, chemical action ensues and a permanent change takes place in the properties of the ingredients employed. For example, the gases known as oxygen and hydrogen combine to form water, the minerals mercury and chlorine to form calomel, and the new substances in such cases possess properties unlike those from which they originated. These combinations are termed chemical compounds, or for brevity, compounds, from the fact that a permanent chemical combination or chemical decomposition is effected, and the new substance has properties which resemble neither of its component parts. In brief then, the mechanical combination of substances produces a

mixture; the chemical a compound. In a mixture the properties of the substance formed vary in proportion to the quantity of the ingredients used. Thus, brine is said to be weak or strong, as it contains little or a greater portion of salt, and so spirituous liquors are graded by the quantity of alcohol they contain. Not so with a compound, for by the chemical action which takes place the special properties of the ingredients are rendered inert and cease to exist while the combination continues.

The chemical combinations of the elementary substances in nature, have in comparatively modern times, by innumerable experiments, and patient and long-protracted investigation, been discovered to take place only under certain definite conditions, or under a positive inexorable law of nature. This is stated in our most reliable works, is, *that the elemental substances unite by chemical action only in constant and definite proportions.* So a certain or definite quantity of one element, say oxygen, will combine, with a definite quantity of another, say hydrogen, and form water, a chemical compound; in other words, eight pounds of oxygen and one pound of hydrogen, enter into the combination of nine pounds, or one gallon of water. Should the experimenter use twenty pounds of oxygen, and only one pound of hydrogen, only one gallon of water will be formed and the remaining twelve pounds of oxygen will remain unchanged. In like manner six pounds of carbon chemically unite with eight pounds of oxygen to form carbonic oxide, and as these substances never unite in a less proportion a fixed ratio is established between them. So, also, fourteen pounds of nitrogen combines chemically with eight pounds of oxygen to form nitrous oxide, and thus we have a positive and definite ratio, between eight pounds of oxygen, and each of the other three organic elements—as one of hydrogen, six of carbon, or fourteen of nitrogen combine with it to form a distinct and definite compound. These numbers, eight, one, six and fourteen are in chemistry said to be *equivalents* to each other, though in fact they are but the *definite proportions*, representing the weight of each of the elements as they enter into combination. By extended investigation and manifold experiments, chemists have found that this law of fixed and definite proportions is universal, that it applies to all substances, and hence not only the four organic elements, but also all the numerous mineral elements in nature have a known or established equivalent, which may be represented by a number.

The four organic elements are, for the sake of brevity, commonly designated by their initial letter, and these as capitals are used to denote both the substances themselves and their equivalent or proportional, that is, H represents one part or atom by weight of hydrogen, C six of carbon, O eight of oxygen, and N fourteen of nitrogen. Thus, these letters become symbols, and H O (one atom or pound of hydrogen and eight of oxygen) means water. C O (six atoms or pounds of carbon and eight of oxygen) carbonic oxide, and so on.

Again, it is found that while the quantities of substances which unite chemically are definite and certain, the properties or qualities of the compounds formed are generally the same, not variable or uncertain. So under whatever conditions an equivalent of oxygen and one of hydrogen combine, pure water is the result, and its qualities are equally as definite as are those of its ingredients. Similar results are obtained in the combination of many different substances, and the compounds formed are known not to differ

in qualities on account of the circumstances of formation. Yet this is not universally the case, for we learn that hydrogen and carbon in the same quantity, the very same proportions may combine, under different conditions, to form oil of turpentine or oil of lemons, which differ widely in properties and uses. Still further, starch, cane sugar and gum, three very abundant products in nature's laboratory, are proved by analysis to contain identically the same elements or ingredients, carbon, hydrogen and oxygen. Thus twelve equivalents of carbon, combining chemically with ten of hydrogen and ten of oxygen forms either starch, cane sugar or gum, and so the formula (C 12, H 10, O 10,) may represent each of the three, the properties of which are so very unlike, that it seems almost incredible that the components or ingredients are the same, and have united in the same quantity, but under different conditions. In many compounds, it is proven beyond question that the same elements are combined and in same proportion, however widely the resulting substances may differ in their sensible, medicinal or other properties. Such compounds are termed by chemists *isomeric* bodies. The law, then, that elemental substances unite in definite and constant proportions to form compounds of equally definite and constant properties, though generally, is not universally true, for in the isomeric bodies we find an apparent deviation from it. Yet when we investigate the circumstances or conditions under which the combination takes place, we find the cause of deviation, so that we at once conclude, that the result is not the work of chance, but governed by a positive law of nature.

Chemical combinations are also governed by another important law termed that of *multiple proportions.* As by innumerable experiments, the law of equivalents or fixed ratio above explained was discovered, so in the same line of investigation it was ascertained that each of the organic elements will unite with the others in several different proportions to form distinct and permanent compounds. Thus two parts or equivalents of carbon unite with two of oxygen to form carbonic oxide, with three of oxygen to form oxalic acid, or with four of oxygen to produce carbonic acid. So nitrogen will combine with one, two, three, four or five equivalents of oxygen to form a series of permanent compounds. In each case, however, it was observed by the experimenters, that the quantity (by weight) of each substance which enters into the several compounds, if not actually represented by its equivalent number, is represented by some *simple multiple* of it. Hence in the formation of compounds, the law of chemical combination, that *the elements unite only in constant and definite proportions*, represented by equivalents, is supplemented by the law of *multiple proportions.*

The number of compounds which can be formed of the four organic elements alone, is very numerous, but a few only of them are yet known to have a direct and important influence on the growth and fruiting or seeding of plants, hence these only are of special interest to the farmer and horticulturist. There are five, to-wit: air, water, carbonic acid, ammonia and nitric acid, which demand special attention. The two first being the most abundant of all substances in nature, and not only serving as plant food, but as the principal medium by and with which all plant food is conveyed to and incorporated into the roots and leaves of vegetation; the third being ever present in the air and in the soil and indispensable to the formation of all organization; the fourth,

by reason of its peculiarly stimulating effect on plant growth, and the last, on account of its ready combination with the mineral alkalies, lime, potash etc., in preparing, if not actually producing plant food. Of the air, composed mainly of oxygen and nitrogen, in which all plants live, and from which they derive a large portion of their food, I have heretofore spoken so frequently and fully that I pass it by with bare mention. Of water, composed of one equivalent of oxygen and one of hydrogen, so essential to animal life and entering so largely into every organized body, so far as regards its importance in sustaining plant life and promoting plant growth, it is quite unnecessary to speak to any Kansan, for its scarcity in septennial years has proved to all that it is a prime factor, eminently, yea pre-eminently essential. Still, while climate vicissitudes may compel each one to observe the relations of plant life to water, this vivifying compound has some properties which deserve careful attention. Its power as a *solvent*, in other words of incorporating into its own mass, both gases and solids, mineral as well as vegetable matter, are truly remarkable. It absorbs from the air a portion of oxygen, nitrogen, carbonic acid, or almost any other gaseous substance or vapor it may contain. Sugar, salt and many other solids lose their form by mixture with it, and it is noticed that its solvent power generally increases as heat is applied. Its affinity for certain solids, for instance, lime, ashes, clay, etc., is truly wonderful, and the value of manures and fertilizers doubtless depends largely on their capability of absorbing and retaining moisture. Though water in its ordinary form, by holding in solution diverse elements of plant food, is the chief medium by which such elements are conveyed to the roots, and are taken up and conveyed in the sap to all parts of the structure, body, branches and leaves, in a state of vapor, it performs a scarcely less important office, and contributes greatly to their life and growth. It constantly combines with the air, rendering it in a greater or less degree humid, and in vaporized form accompanies the air, as it penetrates the innumerable spaces, infinitely small as well as visible to the naked eye, of all solids on and near the surface of the earth. In this gaseous form water is incessantly taken up from the ocean, seas, lakes and streams, evaporated from all moist substances, and distributed by the winds to the dryer portions of the earth, where it is absorbed to permeate the soil and give nourishment to growing plants. Not only this, but it also enters all the pores of the leaves of every growing thing, and the lungs of all animals, and thus in a communicated form supplies an absolute need of every organic thing endowed with life in the vast realm of nature.

Next, in importance, of the compounds of the organic elements, to air and water, is that formed by the combination of two equivalents of oxygen and one of carbon, known as carbonic acid. It is a colorless gas, like oxygen, hydrogen and nitrogen, but has an acid taste and smell, and like other acids reddens vegetable blues. Water at a moderate temperature dissolves or rather absorbs a little more than its own bulk of this compound in the atmosphere, but like other gases it may be greatly compressed, and thus water may be made to hold several times its own bulk of it, as long as the pressure is maintained. A familiar instance of this, is the bottled soda water of the shops, in which the compressed carbonic acid is retained in the water by a cork secured by cord or wire. The instant the pressure is removed, the gas

forcibly expands and escapes into the air, causing a lively appearance, which is only the agitation of the water, produced by the efforts of the gas in making its escape from the unnatural situation. Carbonic acid is about one-half heavier than common air, hence ascends much more slowly than the elementary gases, and exists in largest quantities near the surface of the earth. It is produced incessantly by the combustion of organic matter, and in volcanic regions rises in vast quantities, and being unable to ascend into the higher atmosphere, flows along on and near the surface, drifted by the winds, and as it is spread over great areas, it is constantly blending with and entering into the composition of the air. Thus it is evident that while on an average it constitutes only the one-twenty-five-hundredth part of the atmosphere, it may in some localities, as when forests are burned, form a much greater portion.

In a pure state carbonic acid instantly checks animal respiration, and proves speedily fatal to all plant life, yet in the small proportion existing in the air it is the indispensable source of animal heat and constitutes the greater portion of all plant food, being constantly absorbed or imbibed by the leaves, and also by the roots.

The experiments of De Saussure in respect to the effect of carbonic acid, in excess of what is usually contained in the air, on plant life and growth are eminently interesting and instructive. He found that the growth of plants was stimulated *in the sunshine*, when the quantity of this compound was increased so as to constitute about one-twelfth of the air, that they ceased to grow when it formed two-thirds and speedily died when it was made one-half of their surrounding atmosphere, and that *in the shade*, any increase of this gas in the air proved injurious. Just here, did time permit, I might pause to reflect on the beneficent laws of nature, by which such quantity of this gas is constantly combined with the air, as renders it healthful to animal and vegetable life in sunshine and shade, by day as well as by night.

Carbonic acid, composed as we have seen, of one equivalent of carbon and two of oxygen, combines with the alkaline elements, lime, potash, soda, etc., to form the carbonates which are in common use, and to some extent are applied to soils as fertilizers. Thus, the lime used in making mortar, and the soda in making bread are respectively the carbonates of calcium (lime) and sodium, and the concentrated lye so commonly used in "breaking" water and making soap, is the carbonate of potash. By means of water these carbonates are dissolved and in this form reach the roots of plants, and are made available in their growth. Hence, this compound of the organic elements is not only indispensable to plant growth (as heretofore shown) but becomes one of the active forces of nature in the preparation of plant food.

Here the question arises, whence comes the supply of this important factor of organization and growth? If such vast quantities are consumed by the leaves and taken up by the roots of all growing plants, more than half of their entire substance from what source in nature it is replenished? Science answers, it is produced by the fermentation of all vegetable substances, it is generated in the process of decay and decomposition of both animal and vegetable matter, in volcanic regions it is-

sues from the cracks and fissures of the rocks, and is even furnished to the atmosphere by the water of certain springs. Still, it seems probable, that the larger portion results from the daily burning of millions of cords of wood, and millions of tons of coal, the principal portion of which are by the process of combustion incorporated into the air, in the form of carbonic acid.

Two other compounds of carbon and oxygen, that is, one equivalent of carbon and one of oxygen, termed carbonic oxide, and two of carbon and three of oxygen, known as oxalic acid, and found by analysis to exist in many plants, but it is generally understood that these combinations have resulted within the plants, during the process of growth, and neither are known directly to influence or minister to plant growth.

Another compound of the organic elements consisting of one equivalent of nitrogen and three of hydrogen (NH₃), commonly known as ammonia, possesses many peculiar and interesting properties, and exerts a powerful effect on plant growth. Though merely the combination of two colorless gases, which have neither taste nor smell, it is readily distinguished by having both these sensible properties in a remarkable degree, as well as by being absorbed by all porous bodies. Water readily absorbs it, and can be made to contain 70 times its own bulk of this volatile gas, and contained in this proportion in water, it is sold at our drug stores as ammonia, and known to many as hartshorn. The pure gas has an acrid alkaline taste, extinguishes combustion, instantly suffocates animals, and not only kills growing plants, but gradually destroys the texture of their parts, in a word, it disorganizes them. All porous vegetable substances, especially when in a decaying state absorb ammonia rapidly, as do porous soils, and even the more compact clays of our subsoils when they come in contact with it. Charcoal will absorb about ninety-five times its own bulk of this remarkable compound, and light friable soils, when they contain a considerable portion of decaying organic matter retain a still greater portion. Having, in a pure state but little more than one-half the weight of air, it rises rapidly into the atmosphere, combining with the carbonic acid, and other acid vapors it meets with, and on account of its volatile nature, is incessantly shifting from one to another and forming new combinations. Though it is not known to form any large deposits, or enter as a constituent part into the great mass of mineral substances of which the crust of the earth is composed, it is generally diffused among all the substances on the surface, and exists abundantly in a state of combination with many. Of these, the most common in a commercial way, are the carbonate, nitrate and muriate of ammonia, which as salts have a direct and favorable influence on vegetable life.

This gas is being constantly formed by the decomposition of animal and vegetable matter, its presence being most frequently observable, as it rises in an uncombined state from manure heaps, barnyards and stable floors to mingle with the air, giving it an unpleasant odor, and hence many are led to believe that it is only produced in such places, when in fact it is very generally diffused in the air, and absorbed by almost all porous or damp substances. It exercises a powerful influence on vegetation, not only promoting

rapidity and luxuriance of growth, but as an active force in the interior portions, causing the substances taken up as plant food to separate from some and recombine with other elements, and so build up the structure. In this way as a transforming agent, uniting successively with the organic elements and their principal compounds as the nature of each plant requires, it seems to be a sort of distributive force essential to all plant growth, for a full explanation of which I must refer you to our standard writers on organic chemistry and vegetable physiology.

With brief reference to one other very important compound, I must close this already too lengthy paper. The combination of one equivalent of nitrogen with five of oxygen (N O₅) forms a liquid known as nitric acid. It derives its name from nitre, quite commonly called saltpeter, as it is generally obtained in a pure state by the distillation of this permanent salt. It is an active and corrosive acid, imparting a yellow color to most animal and vegetable substances; in the smallest quantity staining the human skin, and in larger quantity producing a painful sore, as it rapidly oxidizes this, as it does all other organic substances, apparently yielding up to them a portion of its oxygen.

It is not found in a pure state in nature, but in many portions of both continents, especially in the tropical regions, it is found in great abundance in combination with lime, soda and potash, known in commerce as the nitrates of soda, lime and potash. These salts, formed by the combination of nitric acid with the several alkalies, are very soluble in water, yet retain a solid form in a dry atmosphere. Some, especially the nitrates of lime, soda and magnesia, so strongly attract moisture from the air, that in damp weather they are inclined to assume a liquid form, and hence in soils increase its powers of absorbing and retaining moisture.

The nitrates in small quantities have a direct stimulating and salutary effect upon plant growth, especially the grasses; yet in larger quantities are more or less injurious, depending it is said upon the nature or condition of the plants themselves, and this may account for the diversity of results noticeable, in their use as fertilizers. For, when a soil has naturally enough of either of these elements in its composition to induce the vigorous growth of any order or genus of plants, the addition of more will probably prove deleterious rather than beneficial.

The most important office or use which nitric acid has in its relation to soils, and plant growth, consists in its remarkable solvent powers, for by its action the alkaline mineral elements and probably others become soluble, that is, capable of assuming a liquid form, which is the condition precedent to their being taken up by the roots, so as to be distributed by the sap and so influence and aid plant growth. As, like carbonic acid, it is to some extent exhaled by the leaves, it must necessarily pervade every portion of the developing structure, and in the interior portion very probably asserts its solvent powers, and assists in the proper distribution of the materials employed in perfecting the organization, which is manifested alike in the annual growth of the diminutive daisy of early spring-time, and the giant oak which may survive for centuries.

In this partial, and really superficial investigation of a few of the com-

pounds essential in plant food. I have first noted the distinction between mixtures and compounds, then stated the laws of chemical combination by which all compounds are formed, and explained the use of the capital letters H O C and N as symbols of the organic elements. I have next directed your special attention to the five compounds of the organic elements, which have a direct and potential effect on plant life and growth, to-wit: air water, carbonic acid, ammonia and nitric acid. Passing by air with bare mention, and advertent but briefly to the properties of water and its uses in the grand economy of plant life, I have dwelt at some length upon the other three compounds which have a direct influence on plant life, being the special agents which transform the organic and mineral elements into available plant food, and furnish the means of its transmission into the structural growth of perennial as well as annual plants, hence, in connection with the life principle, being the direct and effective agents which are employed in the laboratory and commissary department of nature, in clothing the earth with verdure and beauty.

Other substances are indirect auxiliaries to plant growth. For instance, phosphoric acid, by combination with potash, lime and soda, constitutes the valuable commercial fertilizers, known as the phosphates, which are extensively used in the Eastern States and Europe, and doubtless prove a valuable addition to many soils. So, while other compounds are indirectly effective and useful in promoting the chemical changes by which plant food is prepared, those treated of in this paper are the direct and immediate promoters of plant growth, being essential to perfect organization, yea, absolutely necessary in the germination of seeds, and in sustaining plant life during all the successive stages of growth.

Do you ask why I dwell upon these compounds? I can only answer that I find their relation to plant food and growth a delightful study; and as I gain a more thorough knowledge of the elements employed and the natural forces which universally operate in forest, field and garden, I think I can better understand the nature and needs of every plant I cultivate, and hence give it such food and care as it naturally requires. More than this, as I investigate the combination of the elements, understand the active properties of the compounds, and partially comprehend the wonderful forces ever at work in weaving for the earth its green mantle, adorning it with lovely flowers and gradually bringing to maturity seeds, grains and fruits, and thus providing for the sustenance of all animal life, and especially for the existence, health and happiness of mankind, I acquire by even a partial insight into the arcanæ of nature more actual knowledge of the power, and the designs, as well as the sublime love and supreme beneficence of the Author and Creator of the universe for all his creations, and thus with ever-devotional spirit am constrained constantly to "look through nature up to nature's God."



INFANTILE
Skin & Scalp
DISEASES
cured by
CUTICURA
Remedies.

FOR CLEANSING, PURIFYING AND beautifying the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood diseases, from pimples to scrofula.

Sold every where. Price, CUTICURA, 50 cents; SOAP, 25 cents; RESOLVENT, \$1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."
Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

KIDNEY PAINS, Backache and Weakness cured by CUTICURA ANTI-PAIN PLASTER, an instantaneous pain-subduing plaster. 25 cts.

M.M.L. MEXICAN MUS-TANG LINIMENT Should be kept in stable, Kitchen, Factory, Store & Shop!

M.M.L. MEXICAN MUS-TANG LINIMENT Should be kept in stable, Kitchen, Factory, Store & Shop!

M.M.L. MEXICAN MUS-TANG LINIMENT is for Man & Beast. Kills Pain. Rub it in very vigorously!

M.M.L. MEXICAN MUS-TANG LINIMENT is for Man & Beast. Kills Pain. Rub it in very vigorously!

WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Correspondence and remittances for the KANSAS FARMER on account of this Weather Department should be directed to C. C. Blake, Topeka, Kas. See advertisement of Blake's Almanac on another page.]

RAINFALL FOR THE WEEK ENDING AT 9 P. M., SEPTEMBER 20.

In the east third of the north half of Kansas there will be three-fourths of an inch of rainfall on the average for that week. In the middle third of the north half it will be one inch; while in the west third of the north half it will not exceed one-fourth of an inch.

RAINFALL FOR WEEK ENDING AT 9 P. M., SEPTEMBER 27.

In the east third of the north half of Kansas the rainfall for said week will amount to one and one-fourth inches. In the middle third of the north half it will be one inch, and about one inch in the west third of the north half.

The principal rain for the two weeks will begin about the 20th of September, and continue for nearly thirty-six hours in those sections where we have indicated the greatest rainfall. The figures we have given for the various sections should be taken as approximate, and as showing the relative amount of rainfall in the different localities.

TEMPERATURE.

The temperature for the two weeks will be about as warm as usual for that season, though there may be some slight touches of frost during the last week in the most northern part of the State; but we do not think frost will do any harm in Kansas.

Our calculations for all the States for October are not yet completed. We will have them ready for our next issue.

VERIFICATION FOR AUGUST.

In the eastern half of Kansas the average rainfall in July for many years has been four and one-fourth inches, and in August it has been three and one-half inches. In the western half of Kansas the average for many years has been three and one-half inches in July, and two and one-half inches in August.

Now what are the facts? We have the complete reports for every day in the month for every State and Territory as well as for Canada. We have tabulated, compiled and charted them, having all the figures and charts now before us.

Assistant Director of the Weather Service, at Washburn college, Topeka. But as to western Kansas, the daily reports show that at Dodge City only one-fourth of an inch of rain fell during the first sixteen days of August; and Mr. Jennings' charts show that the average for the western half of Kansas for the first sixteen days was a little less than one inch.

The same state of facts exists all over the Union and in Canada, though we cannot use up space in giving the details. In Quebec and New England it was quite wet after the 10th as predicted. In the Atlantic and Gulf States it was as predicted. At Galveston there was 14.42 inches of rain and only 1.24 inches at Fort Davis.

If the rainfall had been excessive in the upper Mississippi valley in August, then it would have been deficient in Kansas, according to the laws stated in our Almanac for 1887.

VOICE OF THE PEOPLE.

We could publish many letters showing what the people think of our work if we had the space to spare. The following is a sample:

JAMESTOWN, KAS., Aug. 30, 1888. C. C. BLAKE:—Find enclosed 50 cents for your Almanac. I have all the others you have published, and they have made me more money, by telling me what the weather would be in advance, than anything else I ever invested in. Wishing you success in your noble work, I remain F. B. CHASE.

Kansas Weekly Weather Report.

[Furnished by the Kansas Weather Service.] For week ending 9 p. m., Thursday, September 6, 1888.

This fine weather is rapidly ripening the corn in the eastern and northern counties, where it was delayed by the heavy rains of the past few weeks. Corn cutting is in general progress, while its use for feed has been general the past two weeks.

T. B. JENNINGS, Signal Corps, Asst. Director.

TOPEKA REPORT.

Abstract for the week ending Saturday, September 8, 1888: Temperature.—Highest at 2 p. m., 91° on Saturday, the 8th; lowest at same hour, 78° on Sunday and Monday, the 2d and 3d.

Boys!

If you are interested in a business education, that will be worth a fortune to you if taken, CUT THIS OUT and mail to me, and I will send you by mail, FREE, an elegant illustrated Catalogue, and beautiful specimens of penmanship.

Send for a catalogue of Campbell Normal University, Holton, Kas.

Try a course of short-hand lessons by mail from Ritner's Commercial college.

Send for a circular of the music department of Campbell Normal University, Holton, Kas.

The preparatory department of Campbell Normal University is the most thorough in the West.

Be thoroughly equipped for good paying work by attending Ritner's Commercial college this winter.

Now is the time to enter Ritner's Commercial college, St. Joseph, Mo. See advertisement in another column.

KANSAS FAIRS.

A complete list of the fairs to be held in Kansas this year:

- Kansas State Fair Association—Topeka, September 17-22. Western National Fair Association—Lawrence, September 8-8. Anderson County Fair Association—Garnett, August 28-31.

Patents to Kansas People.

The following list is prepared from the official records (through Washington office) by J. C. Higdon, solicitor of patents, Hall Building, Kansas City, Mo., from whom information relating to patents may be obtained.

- Apparatus for making extract of tea—Robt. E. Huff, of Eureka. Washing machine—Alfred M. Wilson, Greenleaf.

For Sale or Exchange for Good Real Estate, a

Herd of Fine Short-horn Cattle

And one IMPORTED PERCHERON STALLION—an excellent breeder. Also, one ENGLISH COACH STALLION—very fine. Address D. H. SCOTT, Larned, Kansas.

FOR SALE TO FEEDERS, STEERS.

One, two and three-year-olds, in Cherokee Strip, near Kansas line, suitable for feeding or roughing. To parties making first-class paper, will be sold partly on time.

\$65 A MONTH AND BOARD for 3 Agents—Bright Young Men, Ladies, Teachers, Students, or Ministers, in each county, for a new Popular Book. Above salary or highest commissions. Exclusive territory. 30 days credit. Address P. W. ZIEGLER & CO., 113 Adams St., CHICAGO, ILL.

\$75.00 to \$250.00 A MONTH can be made preferred who can furnish a horse and give their whole time to the business. Spare moments may be profitably employed also.

REASONS

Why Ayer's Sarsaparilla is preferable to any other for the cure of Blood Diseases.

- Because no poisonous or deleterious ingredients enter into the composition of Ayer's Sarsaparilla. —Ayer's Sarsaparilla contains only the purest and most effective remedial properties.

Ayer's Sarsaparilla.

PREPARED BY Dr. J. C. Ayer & Co., Lowell, Mass. Price \$1; six bottles, \$5. Worth \$5 a bottle.

HUMPHREYS' HOMEOPATHIC VETERINARY SPECIFICS

That the diseases of domestic animals, HORSES, CATTLE, SHEEP, DOGS, HOGS and POULTRY, are cured by Humphreys' Veterinary Specifics, is as true as that people ride on railroads.

500 PAGE BOOK on treatment and care of Domestic Animals, and stable chart mounted on rollers, sent free.

- CURES: A. A.—Fever, Congestions, Inflammation, Spinal Meningitis, Milk Fever. B. B.—Strains, Lameness, Rheumatism.

The BUYERS' GUIDE is issued March and Sept., each year. It is an encyclopedia of useful information for all who purchase the luxuries or the necessities of life.

We can clothe you and furnish you with all the necessary and unnecessary appliances to ride, walk, dance, sleep, eat, fish, hunt, work, go to church, or stay at home, and in various sizes, styles and quantities. Just figure out what is required to do all these things COMFORTABLY, and you can make a fair estimate of the value of the BUYERS' GUIDE, which will be sent upon receipt of 10 cents to pay postage.

Illustration of a music box with text: THE NEW AMERICAN MUSICAL BOX. HEIGHT 14 IN. LENGTH 30 IN. WIDTH 7 1/2 IN. WEIGHT 30 LBS. FREE WILL PLAY 100 TUNES.

WORK FOR ALL. \$30 a week and expenses paid. Samples worth \$5 and particulars free. P. O. VICKERY, Augusta, Maine.

The Veterinarian.

[This department of the KANSAS FARMER is in charge of Dr. F. H. Armstrong, V.S., Topeka, a graduate of Toronto Veterinary college, who will answer all inquiries addressed to the KANSAS FARMER concerning diseases or accidents to horses and cattle. For this there is no charge. Persons wishing to address him privately by mail on professional business will please enclose one dollar, to insure attention. Address F. H. Armstrong, V.S., No. 114 Fifth St. West, Topeka, Kas.]

ACUTE INDIGESTION.—Please tell what ails my cattle. About a month ago one of my cows was taken sick, and in about four days died; and on last Thursday a steer was taken in the same way, and is at the point of death. The most noted symptoms are as follows: The first noticed was a very dull, hollow look out of the eyes, dead, wiry-looking hair, followed with diarrhoea, and very thirsty; while standing, arched back, drooping head, and seem to be weak in hind parts; will weave when made to move, but not to any great extent; seem to lie down most with head turned to side; will not eat, but will drink every time water is given. The breath of the one that died was offensive; before death a mucus discharge at the nose would scab around the nostrils. Please state in your next issue what is the matter. Is it contagious, and what shall I do in case others should have it? My cattle are looking well, plenty of water, and salted regularly. J. W. Raymond, Kan.

—We judge that your animals have had an attack of Acute Indigestion, the causes of which are various. It may be due to the eating of acid or poisonous plants, drinking of foul or dirty water. Low, wet, moorland pastures may cause it, and the presence of foreign and irritating bodies in the stomach. I would advise you to make a change in pastures.

In regard to treatment, on the approach of any suspicious symptoms administer three-fourths of a pound of Epsom salts, one ounce of carbonate of soda, one-half ounce ginger, as drench, after which, if diarrhoea is present, use the following: Chalk, P. P., two ounces; Catechu, pulverized, four drachms; Gentian, pulverized, four drachms; mix. Give in wheat flour gruel once daily till diarrhoea is somewhat checked. Keep up strength of animal by giving alcohol, or carbonate of ammonia in drinking water.

The Orange County Farmer says the cheap egg foods are principally composed of ground oyster shells, and hence are of little value to the fowls.

We value everything in this world by comparison. Water and air have no intrinsic value, and yet Jay Gould, if famishing in the desert, would give all his wealth for a pint of the former, and think it cheap; hence, life and health are the standard of all values. If your system is full of malaria you will be very miserable; a few doses of Shallenberger's Antidote will make you well and happy. Is one dollar a high price to pay?

A prominent and extensive fruit-grower of Genessee county, N. Y., has invented and quite satisfactorily used for two seasons in securing his apple crop, an apparatus constructed of canvass, resembling somewhat that of an inverted umbrella, into which the fruit is shaken from the tree, and from an aperture in the smaller and lower part, it is deposited in a basket, to be carried away and assorted.

Another Rare Opportunity.

Owing to the fact that the proprietor of the famous Manhattan Herd of Large Berkshire Swine is about to make a change in location and business, the entire herd, without reserve, is offered for sale, either collectively or singly. The right party can with the herd secure the good will of a paying business. This collection is the result of many years of careful breeding and selection, and at the present time contains no culls, but every individual is in the highest thrifty breeding condition. The famous record of the Manhattan Herd a few years since at the leading fairs in the United States is too well known to the public to require mention in detail. Many grand show animals, both young and matured, are offered, among which are some choice yearling and matured sows due to farrow in September, October and November. Young show sows and boars just right to show in class under 1 year this fall and in yearling class next year may be had. Everything will be guaranteed in perfect health and as represented, while prices will be reasonable for class of stock offered. If you want something extra and the foundation of a grand herd, lose no time in corresponding with A. W. Rollins, Manhattan, Kansas.

THE MARKETS.

By Telegraph, September 10, 1888.

LIVE STOCK MARKETS.

St. Louis. CATTLE—Receipts 174, shipments 1,058. Market quoted firm and higher. Choice heavy native steers \$5 00a5 40, fair to good native steers \$4 00a4 90, medium to choice butchers' steers \$3 50a4 25, fair to good stockers and feeders \$2 00a3 40, grass rangers \$1 75a3 60. HOGS—Receipts 18, shipments 247. Market steady and strong. Choice heavy and butchers' selections \$6 45a6 60, medium to prime packing \$6 25a6 45, ordinary to best light grades \$4 75a6 40. SHEEP—Receipts 205, shipments 1,779. Market dull and weak. Common to good sheep, \$2 00a4 00.

Chicago. CATTLE—Receipts 13,000. Market good and strong. Top natives, \$6 00; Texas, \$5 75; best steers, \$5 70a6 00; good, \$4 90a5 60; medium, \$4 25a4 80; common, \$3 50a4 25; stockers, \$2 00a 2 85; feeders, \$2 75a3 10; bulls, \$1 75a2 50; cows, \$1 50a3 00; Texas steers, \$2 50a3 75. HOGS—Receipts 8,000. Market 5a10c higher. Mixed, \$6 00a6 50; heavy, \$6 10a6 70; light, \$5 85 a6 30; skips, \$4 00a5 75. SHEEP—Receipts 5,000. Market strong. Native sheep, \$2 50a4 00; Texas, \$2 50a3 40; lambs, per owt., \$3 50a5 75.

Kansas City. CATTLE—Prices were uneven. Some of the good cattle sold steady. Other cattle were sometimes as much as 15c lower. Dressed beef and shipping, \$4 20a4 70. HOGS—There were less than 2,000 hogs on the yards and most of them were stale. Quality not very good as a rule. The market was on the quiet order, as 1,000 hogs, only, are a drag. Three packers bought and a St. Louis buyer took packing styles. The feeling was a little better on coarse heavy grades. Some of this kind sold at \$6 15 that were worth but \$6 10 Saturday. The top price was \$6 25 for 225-lb. stuff. Bulk of sales at \$6 10a6 20. SHEEP—The receipts were large and there was a good demand for muttons and wethers. 588 choice Kansas feeders sold at \$2 60, worth about \$2 40 last week. Muttons were also higher. The Colorado sheep sold at \$3 75 were the highest of the season.

PRODUCE MARKETS.

New York. WHEAT—No. 2 red, 98 3/4a99 1/2c elevator. CORN—No. 2, 64 3/4a55 1/2c afloat. St. Louis. FLOUR—Quiet but steady. WHEAT—No. 2 red, cash, 83c. CORN—No. 2 cash, 42c. OATS—No. 2 cash, 24a24 1/2c. RYE—Firm at 55c. Chicago. Cash quotations were as follows: FLOUR—Quiet and firm. WHEAT—No. 2 spring, 92 1/4a92 3/4c; No. 3 spring, 95a96c; No. 2 red, 92 1/2c. CORN—No. 2, 45 1/2c. OATS—No. 2, 24 1/2c. RYE—No. 2, 55c. BARLEY—No. 2, 53c. FLAXSEED—No. 1, \$1 28a1 20. TIMOTHY—Prime, \$1 64a1 65. PORK—\$14 32 1/2a14 35. LARD—\$9 92 1/2a10 00.

Kansas City. WHEAT—Receipts at regular elevators since last report 20,196 bushels; withdrawals, 13,589 bushels, leaving stock in store as reported to the Board of Trade to-day, 196,261 bushels. There was a weaker market on 'change to-day, and values lower. On the call No. 3 red, cash, sold at 73c-1/2c lower than Saturday's bid for September. No. 2 soft, September, sold at 82c-1c lower than Saturday's bid. CORN—Receipts at regular elevators since last report, 420 bushels; withdrawals, 2,369 bushels, leaving stock in store as reported to the Board of Trade to-day, 55,235 bushels. On track by sample: No. 2 cash, 37 1/2c; No. 2 white, cash, 38c. OATS—No. 2 cash, no bids, 26 1/2c asked. RYE—No. 2 cash, 45c bid, no offerings. HAY—Receipts 4c cars. Market weak. New prairie, \$8 00a8 50; fancy timothy, \$9 50; good to choice, \$8 50a9 00. SEEDS—We quote: Flaxseed, \$1 07 per bu. on a basis of pure. Castor beans, \$1 10 per bu. for prime. OIL-CAKE—Per 100 lbs. sacked, f. o. b., \$1 25; \$1 10 per 1,000 lbs.; \$2 00 per ton; car lots, \$19 00 per ten. FLOUR—Demand good and market firm for top grades. Sales: 3 cars by sample at \$1 77 1/2. BUTTER—Market firm for creamery. Choice dairy and store-packed in good demand. Poor stock is hard to dispose of. We quote: Creamery, fancy, 18c; good, 16c; dairy, fancy, 15c; good to choice store-packed, 11a12c; poor, 8c. CHEESE—We quote: Full cream, twins, 10c; full cream, Young America, 11c. EGGS—Receipts fair and market steady at 15c per dozen for strictly fresh candled. GREEN FRUITS—Peaches, cling, common,

15a26c per 1/2 bu. box; choice, 40a50. Free-stones, 45a55c; fancy, 65c. Apples, \$1 09a1 50 per bbl. POTATOES—Home-grown, 35a40c per bushel. BROOMCORN—Dull and weak. We quote: Green self-working, 4c; green hurl, 4c; green inside and covers, 2 1/2a3c; red-tipped and common self-working, 2c; crooked, 1c. PROVISIONS—Following quotations are for round lots. Job lots usually 1/2c higher. Sugar-cured meats (canned or plain): Hams 12 1/2c, breakfast bacon 11 1/2c, dried beef 8 1/2c. Dry salt meats: clear rib sides \$9 15, long clear sides \$8 65, shoulders \$8 25, short clear sides \$8 65. Smoked meats: clear rib sides \$9 90, long clear sides \$9 40, shoulders \$8 00, short clear sides \$9 40. Barrel meats: mess pork \$14 50. Choice tierce lard, \$8 75. Topeka Markets. PRODUCE AND PROVISIONS—Corrected weekly by W. W. Manspecker & Co., 711 Kansas avenue. (Wholesale price). Butter, per lb.....\$ 12 1/2a15 Eggs (fresh) per doz..... 14 Beans, white navy, H. P., per bus..... 2 85 Potatoes (new)..... 30a40 Beets..... 40

RIVERVIEW The Prettiest Young City of the Smoky Valley. Beautiful Springs, Lake, and also, what the name implies, RIVER VIEW. Buy a home in or farm adjoining Riverview. Call on or address THOS. E. FULGHUM, Hays City, Kansas.

HAY FEVER CATARRH ELY'S CREAM BALM CURES COLD IN THE HEAD CATARRH OF THE NOSE, TEAR-DUCTS AND THROAT. The acrid discharge is accompanied with a burning sensation. There are severe spasms of sneezing, frequent attacks of headache, watery and inflamed eyes. Try the Cure. ELY'S CREAM BALM. HAY-FEVER. A particle is applied into each nostril and is agreeable. Price 50 cts. at drugists; by mail, registered, 60 cts. ELY BROTHERS, 56 Warren St., New York.

SAVE MONEY on Dry Goods, Clothing, Boots, Shoes, Cutlery, Hardware, Harness, Saddles, Jewelry, Books, Guns, Sporting Goods, Groceries, and other articles for personal and family use. We sell direct to consumers in any quantity, at wholesale prices. Catalogue and Price List Free, upon receipt of 4 cts. stamps to pay postage. It will pay you to send for it. THE PEOPLE'S SUPPLY CO., 48 & 50 E. Lake St., - CHICAGO, ILL. FATFOLKS using "Anti-Corpulence Pills" lose 15 lbs. a month. They cause no sickness, contain no poison and never fail. Particulars (sealed) 4c. Wilcox Specific Co., Phila., Pa.

Proposed Amendments to the Constitution.

SENATE JOINT RESOLUTION NO. 2. SENATE JOINT RESOLUTION No. 2, Proposing an amendment to section one, article eight of the constitution, by striking out the word "white." Be it resolved by the Legislature of the State of Kansas, two-thirds of the members elected to each house thereof concurring therein: SECTION 1. The following proposition to amend the constitution of the state of Kansas is hereby submitted to the qualified electors of the state for their approval or rejection, namely: The constitution of the state of Kansas is hereby amended by striking out the word "white" in section one, article eight, relating to the militia of the state, so that said section as amended shall read as follows: Section 1. The militia shall be composed of all able-bodied male citizens between the ages of twenty-one and forty-five years, except such as are exempted by the laws of the United States or of this state; but all citizens of any religious denomination whatever who from scruples of conscience may be averse to bearing arms shall be exempted therefrom upon such conditions as may be prescribed by law. SEC. 2. This proposition shall be submitted to the electors of this state at the general election for the election of representatives to the legislature in the year A. D. eighteen hundred and eighty-eight, for their approval or rejection. Those voting in favor of this proposition to amend the constitution shall have written or printed on their ballots, "For the amendment to section one, article eight of the constitution"; those voting against the proposition to amend the constitution shall have written or printed on their ballots, "Against the amendment to section one, article eight of the constitution." Said ballots shall be received and said vote shall be taken, counted, canvassed, and returns thereof made, in the same manner and in all respects as is provided by law in cases of the election of representatives in the legislature. SEC. 3. This resolution shall take effect and be in force from and after its publication in the statute book. Approved February 28, 1887. I hereby certify that the foregoing is a true and correct copy of the original enrolled resolution now on file in my office, and that the same took effect by publication in the statute book, June 20, 1887. E. B. ALLEN, Secretary of State.

SENATE JOINT RESOLUTION NO. 6. SENATE JOINT RESOLUTION No. 6, For the submission of a proposition to amend the Constitution of the State of Kansas. Be it resolved by the Legislature of the State of Kansas, two-thirds of all the members elected to each branch concurring therein: SECTION 1. The following proposition to amend section seventeen of the bill of rights of the constitution of the state of Kansas shall be submitted to the electors of the state for their approval or rejection, at the general election to be held on the Tuesday succeeding the first Monday of November, A. D. 1888: That section seventeen of the bill of rights of the constitution of the state of Kansas be so amended that it shall read as follows: Section 17. No distinction shall ever be made between citizens of the state of Kansas and the citizens of other states and territories of the United States in reference to the purchase, enjoyment or descent of property. The rights of aliens in reference to the purchase, enjoyment or descent of property may be regulated by law. SEC. 2. The following shall be the method of submitting said proposition to the electors: The ballots shall have written or printed, or partly written and partly printed thereon, "For the proposition to amend section seventeen of the bill of rights of the constitution of the state of Kansas, concerning the purchase, enjoyment and descent of property," or "Against the proposition to amend section seventeen of the bill of rights of the constitution of the state of Kansas, concerning the purchase, enjoyment and descent of property." Said ballots shall be received, and said vote shall be taken, counted, canvassed, and return thereof made, in the same manner in all respects as is provided by law in cases of the election of representatives to the legislature. SEC. 3. This resolution shall take effect and be in force from and after its publication in the statute book. Approved March 4, 1887. I hereby certify that the foregoing is a true and correct copy of the original enrolled resolution now on file in my office, and that the same took effect by publication in the statute book, June 20, 1887. E. B. ALLEN, Secretary of State. Remember the FARMER is now \$1 a year.

WINDMILLS The famous JOKER WINDMILL reduced from \$45 to \$25. Every Mill fully warranted. Thousands in use—eight years standing. Write for circulars and testimonials. PEABODY MFG CO., PEABODY, KAS. \$25.00 CONSIGN YOUR CATTLE, HOGS & SHEEP TO Larimer, Smith & Bridgeford, LIVE STOCK COMMISSION MERCHANTS, Kansas City Stock Yards, Kansas City, Kansas. Highest market prices realized and satisfaction guaranteed. Market reports furnished free to shippers and feeders. Correspondence solicited. Reference:—The National Bank of Commerce, Kansas City. HAGEY & WILHELM, WOOL COMMISSION MERCHANTS ST. LOUIS, MO. REFERENCES:—KANSAS FARMER CO., Topeka, Kas.; Boatmen's Bank, St. Louis; Dunn's Mercantile Reporter, St. Louis; First National Bank, Beloit, Kas. GENERAL AGENTS FOR COOPER'S SHEEP DIP. We guarantee sale and full returns inside of TEN DAYS from receipt of shipment.

The Busy Bee.

How I Produce Comb Honey.

Essay read by George E. Hilton at the joint meeting of the State Farmers' Institute and Progressive Bee-keepers' Association, at Fremont, Mich., February, 1887, and published recently in pamphlet form by the author.

In casting about for a subject on this occasion, I very naturally come to the conclusion that "Comb Honey," or "A Season in a Comb-honey Apiary," would interest the most of you, and perhaps do the greatest possible good to the greatest possible number.

Knowing, as many of you do, that I have now made the production of comb honey a success for the past eight years, a review of what I consider to be the best methods, even at this time of year, may be of value the coming season. Should it give you any new ideas whereby you can increase your profits in this, our chosen pursuit, then my object in writing this paper will be accomplished.

The first and great important factor is a hive full of bees at the commencement of the honey flow. And here a paper of interest could be written on spring management.

The question is often asked by the novice, "When is the proper time to put on the surplus cases? The majority of the bee books say, 'As soon as you see little bits of new comb being built along the top bar of the brood-chamber.'" My answer is, as soon as the surplus season opens. In this latitude it is at the opening of the blackberry and raspberry blossoms, followed close by the white clover, which is our main source. Previous to this your crates should be all prepared with sections filled with full sheets of thin foundation. You should also be provided with a zinc queen-excluding honey board. I like these the size of my surplus crate. This avoids all propolizing and snapping and cracking of crates in taking off, and all brace combs from being built from the under side of the sections to the top of brood frames. With me there is no time looked forward to with more interest than the putting on of surplus crates; neither is there a time when the apiarist should exercise more judgment. Approaching a hive we examine it closely, and, if up to the standard, namely, well filled with brood and working bees, we remove all bits of comb from the top bars, lay on our zinc queen-excluding honey board, and put on one crate containing twenty-eight 4x4x1 1/2 inch sections, or seven to the foot.

CRATE FOR SECTIONS.

All things considered, I think this size the best. Perhaps the next hive we approach we have not been able to build up to the standard. We will remove best combs of brood and young bees (being careful not to take the queen), remove the four combs containing the least brood from No. 1 and change places with them, using good judgment in making up the brood nest, keeping the brood in the center of the weak colony, and the combs containing the least brood in the center of the now strong colony. Proceed as before and put on your surplus arrangements, and out of two weak colonies you have one ready for the honey flow; and my experience is, that you will receive more honey, and of a better quality, from this one than you would from the two if left to build up during the honey flow; besides, you have saved yourself the trouble of going over the apiary so many times, as required in the bit of comb plan.

We will now consider the apiary supplied with surplus arrangements, and that the bees are well at work, and that the busy season is upon us. The section must now be watched very closely; and as fast as the crates are about two-thirds full of honey, raise them up and put an empty one arranged as the first under it.

This leaves a space to be filled with combs and honey between the brood nest and the partially filled crate on top. This is just as the bees don't want it; and, as a rule, just as they are coming to a point where the swarming fever is liable to overtake them, they find this great hole in their midst, and it is surprising to see how they will double their energies to fill this cavity; at the same time, they will be finishing the upper

CHICAGO.

KANSAS CITY.

ST. LOUIS.

THE JAMES H. CAMPBELL CO. Live Stock Commission Merchants, FOR THE SALE OF CATTLE, HOGS AND SHEEP.

Rooms 23 and 24, Exchange Building, KANSAS CITY STOCK YARDS. Unequaled facilities for handling consignments of Stock in either of the above cities. Correspondence invited. Market reports furnished free. Refer to Publishers KANSAS FARMER.

crate. It is my custom, at this stage of the proceedings, to go over the apiary every week. My crates are so arranged that I can draw out all the finished sections, replacing them with empty ones, keeping the crate containing the least honey at the bottom, and the one nearest completion at the top.

This prevents the bees from running over the finished section, and removing it as fast as finished gives it to you in its virgin whiteness. This system largely does away with the swarming impulse just at the height of the honey flow; but occasionally a swarm will issue in spite of everything. In this case, what shall we do to prevent the cessation of honey-storing in the surplus apartment? My plan is as follows: As soon as the swarm has left the parent hive, take off the surplus arrangements, lift out all but one comb, and carry them to a new stand. Put in from four to six empty frames, according to the size of the swarm, filling the rest of the brood chamber with a division board, put on my zinc honey board and surplus cases just removed, and close the hive. I proceed with my basket, and shake the swarm from its alighting place into it, and dump the bees in front of the hive whence they came; watch them closely until I am sure that I have the queen, and the work is done. The remaining bees at the alighting place, as soon as they discover the absence of the queen, will return to the old stand; so will the field bees remaining on the seven combs you have carried to the new stand, and all the bees in the fields returning home give you the same working force you had before. The desire for swarming is satisfied, and the work in the sections goes on as though nothing had happened.

Your seven combs have plenty of nurse bees to care for the larvae in them, and at the same time they are so depleted in old bees that they very seldom send out a second swarm.

And now I want to say just a word in regard to the handling and disposition of comb honey. I have bought considerable honey at different times to sell again, and invariably I am obliged to go over the whole lot and clean up the sections. I am sorry to say that honey is a luxury and not a staple at the present time. Now, in times of taking off honey, have the good wife or sister, or some good careful girl, at the honey house, with a knife or piece of glass carefully remove all the propolis and stains that may appear on the sections. Set them away—the best on one shelf and the second grade on another, with a sheet of paper between every two tiers to catch any drippings that may occur, as the honey stains the wood; and the nearer gilt-edge we keep our product, the more we shall realize for the same.

In packing for shipment I find no crate giving as general satisfaction as one holding fourteen or sixteen of these sections. Glasped at each end, they range in weight from twelve to fifteen pounds. They stand shipment well, either by express or freight, and the retailer frequently sells a whole crate to a single customer.

In closing, I feel I can not urge too strongly the use of the zinc queen-excluding honey board. I consider it one of the grandest inventions of the age—no brood in the sections, no fastening the sections, crate and all, to the brood frames, thus tearing off the bottom of the sections, or lifting the brood frames out by their adhering to the crate. In fact, with the experience I have had with them, I would as soon think of putting on sections without foundation starters as putting on crates without a queen-excluding honey board.

Hoping this paper may be thoroughly discussed and criticised at this meeting, I am your humble servant.

GEORGE E. HILTON.

If you could see your own scalp through an ordinary magnifying glass, you would be amazed at the amount of dust, dandruff and dead skin thereon accumulated. The best and most popular preparation for cleansing the scalp is Ayer's Hair Vigor.

SELECT HERD OF LARGE BERKSHIRES!

G. W. BERRY, BERRYTON, Shawnee Co., KANSAS.

My sows represent the Royal Duchess, Sallie, Hillside Belle, Charmer, Stumpy, and other families. These Swanwick and Humfrey families are larger, thicker-fleshed, set on shorter legs, and possess finer qualities than other hogs. Herd headed by British Champion III. 13481 and Dauntless 17417. My aim is to produce a type of Berkshires honorable to the Select Herd and the breed. Correspondence in regard to spring pigs invited.

BERRYTON is located nine miles southeast of TOPKA, on the K., N. & D. R. R. Farm adjoins station.

LOCUST GROVE HERD

LARGE ENGLISH BERKSHIRE SWINE.

Nothing sent out but what is a credit to Locust Grove Herd. Individual excellence combined with purity of breeding, is my motto. Prices to suit the quality of stock offered. Correspondence and inspection solicited. Orders booked now for spring pigs. Address as below, or better, come and see.

JAMES HOUK, Prop'r, Hartwell, Henry Co., Missouri.

ORDERS TAKEN NOW

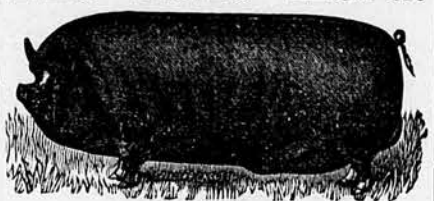
For SPRING PIGS sired by



ROYAL GRANITE 10105,

The best BERKSHIRE boar ever owned at "HAW HILL," and several other first-class sires. Enclose stamp for catalogue and prices. SPRINGER BROS., Springfield, Ill.

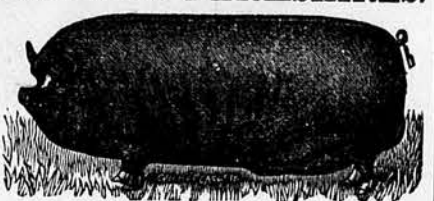
The Echo Herd.



For Registered Prize-winning

BERKSHIRE SWINE AND SOUTHDOWN SHEEP or money refunded. Come and see or address J. M. & F. A. SCOTT, Huntsville, Randolph Co., Mo. Mention Kansas Farmer.]

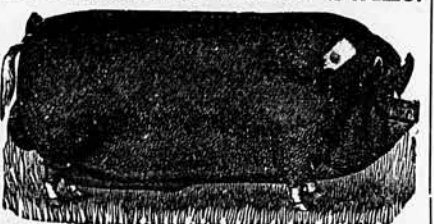
ENGLISH BERKSHIRES.



THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE 4880, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chickens. Your patronage solicited. Write. [Mention this paper.]

M. B. KEAGY, Wellington, Kas.

PLEASANT VALLEY HERD OF Pure-bred Berkshire Swine.



I have thirty breeding sows, all matured animals and of the very best strains of blood. I am using three splendid imported boars, headed by the splendid prize-winner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for pigs of either sex not akin, or for matured animals. Prices reasonable. Satisfaction guaranteed. Send for catalogue and price list, free. S. McCULLOUGH, Ottawa, Kansas.

F. M. LAIL, MARSHALL, Mo.,

Breeder of the very best



POLAND-CHINA HOGS.

Pigs from ten first-class boars for the season's trade.

OTTAWA HERD

of POLAND-CHINA and DUROC-JERSEY Hogs. Twenty head of first-class boars from four to nine months old. Also seventy-five head of sows of same age, sired by Bruce 4695, C. R., Lick's Gilt Edge 2887, C. R., Whipple's Stenwiner 4701, Daley's Corwin 4697. Dams—Mazy 2d 6214, Zelds 3d 8250, Maggie's Perfection 8210, Vone's Perfection 9424, Fay's Gold Drop 11676, Jay's Dimple 12172, Eureka Mayo 12176, and many other equally as well bred, and fine as can be produced by any one. Part of sows bred to gilt-edge boars of the most popular strains. Will sell at prices to suit the times. Never had any cholera in the herd. Write for prices. I. L. WHIPPLE, Box 270, Ottawa, Kas.

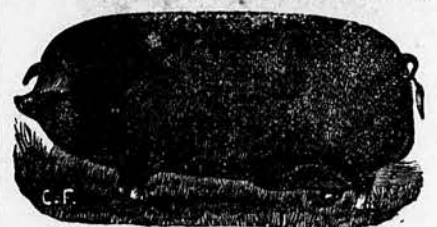
Poland-Chinas

100 PIGS FOR SALE!

NEW BOARS:—Young America 3811, C. R., noted show hog and breeder; nine sweepstakes; sire of sweepstakes hog at Chicago fat stock show. Lord Corwin 4th, 1651; daisy show hog, of the highest premium blood. Lampe's Tom Corwin 6307; gilt-edge premium pedigree. SOWS:—Black Rosas, Gold Dust, Double Corwins, Black Boss, Black Beautys, Buckeyes, Dimples, Stemwinders, etc. Royal blood, gilt-edge pedigrees. Shipped to fifteen States and thirty-three counties in Kansas.

W. S. HANNA, OTTAWA, KANSAS.

MAINS' HERD OF POLAND-CHINAS.



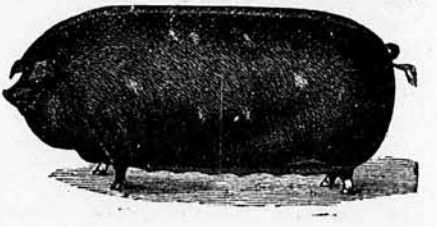
Jas. Mains, Oskaloosa, (Jefferson Co.), Kas., is located two and a half miles southeast of Oskaloosa, on Maple Hill Stock Farm. All hogs eligible to Ohio Poland-China Record. A fine lot of spring pigs now ready, for sale at prices that will suit the times. Also some fall sows now ready to breed or will be bred if desired. Personal inspection solicited.

Gold Dust Herd of Poland-Chinas.



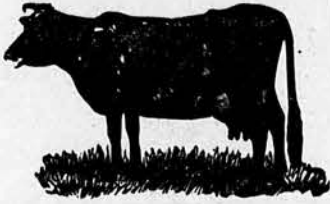
J. M. McKEE, WELLINGTON, KANSAS. Tom Corwin 3d 5293 A. P. C. R. at head of herd. Strains representing Model, Give or Take, Gold Dust, Black Boss and Black Beauty. Have some choice male pigs for sale. Also eggs of P. Rock, Brown Leghorn and Light Brahma, \$1.25 per 13; Toulouse Geese, 15c.; Pekin Duck 10c. each. Write; no catalogue.

Sunflower Stock Farm.



We are breeding Poland-Chinas, the Improved Chester Whites, Berkshires, Small Yorkshires and Duroc-Jersey Swine, and have secured more premiums than any other breeder in the State—last season getting 120 first and sweepstakes and 15 second. We breed from the very best strains, hence our remarkable satisfaction. Of Poultry we breed ten leading varieties, the best to be found in the West; also Toulouse Geese, Bronze and White Holland Turkeys. Eggs in season. Hogs all eligible to record. Reasonable prices. Write your wants. Address H. G. FARMER & SONS, Garnett, Kas.

SHERWOOD & ROHRER STOCK FARM



Home of HASSELMAN'S BROWNIE 28777. Tested on Island of Jersey at rate of 33 pounds 12 ounces in seven days.

BREEDERS OF

A. J. C. C. JERSEY CATTLE,

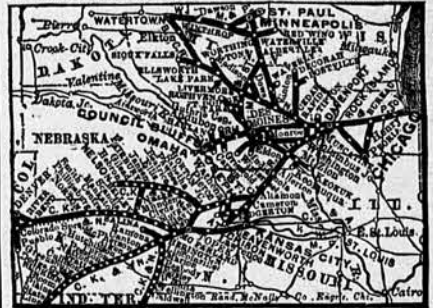
Offer a few choice-bred Bull Calves by such noted sires as the St. Lambert Duke 76 bull, ST. VAL-ENTINE'S DAY 15278, whose sire was a son of Stoke Pogis 3d 2338, and a grandson of Victor Hugo 197; dam a daughter of the great prize bull, Duke P. 76 C.; and the in-bred Coomassie bull, HAPPY GOLD COAST 14718.

Several of these Bulls are old enough for service, and are out of tested cows. To responsible parties, will give time or exchange for cows or heifers.

SHERWOOD & ROHRER, VALLEY CENTER, KANSAS.

A MAN

UNACQUAINTED WITH THE GEOGRAPHY OF THE COUNTRY, WILL OBTAIN MUCH INFORMATION FROM A STUDY OF THIS MAP OF THE



Chicago, Kansas & Nebraska R'y (GREAT ROCK ISLAND ROUTE.)

It affords the best facilities of communication between all important points in KANSAS, NEBRASKA, COLORADO, NEW MEXICO, the INDIAN TERRITORY, TEXAS, and beyond. Its Main Lines and Branches include ST. JOSEPH, KANSAS CITY, NELSON, NORTON, BELLEVILLE, HORTON, TOPEKA, HERINGTON, WICHITA, HUTCHINSON, CALDWELL, DENVER, COLORADO SPRINGS, PUEBLO, and hundreds of other flourishing cities and towns.

The Vast Area of Fertile Country tributary thereto offers rare inducements to farmers, stock growers, and intending settlers of every class. Lands cheap and farms on easy terms. Traverses the famous "GOLDEN BELT" whose varied products and herds of cattle, horses and swine are the admiration of the world.

Prompt and Convenient Connections

at Kansas City and St. Joseph for Chicago, St. Louis and all points East, South and Southeast; with FAST LIMITED TRAINS OF GREAT ROCK ISLAND ROUTE for Davenport, Rock Island, Des Moines, Peoria and Chicago; with ALBERT LEA ROUTE for Spirit Lake, Watertown, Sioux Falls, Minneapolis, St. Paul, and points North and Northwest, and with connecting lines South and Southwest to Texas and Pacific Coast States and Territories.

Splendid Passenger Equipment

Strictly First Class, entirely new, with latest improvements, expressly manufactured for this service, leading all competitors in the comfort and luxury of its accommodations. Elegant Day Coaches, Restful Reclining Chair Cars and Palace Sleeping Cars. Solidly ballasted steel track; iron and stone bridges, commodious stations, and Union Depots at terminal points.

For Tickets, Maps, Folders, or desired information, apply to nearest Coupon Ticket Agent, or address at Topeka, Kansas.

H. A. PARKER, JNO. SEBASTIAN, Vice-Pres. & Gen. Mgr. Gen. Tkt. & Pass. Agt.

THE SOUTHEAST!

Cheap Land Excursions.

Recognizing the popular tendency toward the rapidly-developing but comparatively unimproved sections in the South and Southeast, another series of low-rate excursions is announced by the Memphis Route (K. C., Ft. S. & M. R. R. Co.).

The unexpected success of a similar movement last spring makes it plain that those who wish to invest in the South before values shall advance as rapidly as they certainly will in the near future, should take advantage of this opportunity.

Tickets will be sold to

SOUTH MISSOURI, ARKANSAS, TEXAS, MISSISSIPPI, ALABAMA AND LOUISIANA.

The Excursion dates are as follows:

- August 21.
September 11 and 25.
October 9 and 23.

Everything will be first-class. Reclining Chair Cars and Pullman Buffet Sleepers in excursion trains. Stop-over privileges allowed. Tickets to points west of Mississippi river good thirty days from date of sale; those to points beyond Memphis, sixty days.

For map and full particulars, address J. E. LOCKWOOD, Gen'l Passenger Agent Memphis Route, KANSAS CITY, MO.

Holstein - Friesian Cattle

Of European Herd Book Registry.



The sweepstakes bull PRINCE OF ALTIJWERK (61 M. R.) at head of herd, has no superior. Cows and heifers in this herd with weekly butter records from 14 pounds to 19 pounds 10 1/2 ounces; milk records, 50 to 80 pounds daily. The sweepstakes herd. Write for catalogue. M. E. MOORE, Cameron, Mo. [Mention this paper.]

Holstein - Friesian Cattle.

I have a choice herd of these justly-celebrated cattle of all ages. Also some nice grades, for sale at reasonable prices. Personal inspection invited. Call on or address JNO. D. PRYOR, Winfield, Cowley Co., Kas.

WHY IT PAYS?

ENSILAGE AND FODDER CUTTING. Our 1888 pamphlet (74 pages) containing full descriptive price list of Smalley goods will be mailed free to any address mentioning this paper. Every practical Dairyman and Stockraiser should have this Book. SMALLEY MFG. CO., Manitowoc, Wis.

HAAFF'S NEW PRACTICAL DEHORNER. Fifty illustrations. New Tools. Cattle Tags. New Water-heater. Send for circular. Agents wanted. Mention this paper. H. H. HAAFF, Box 193, Chicago, Ill.



The Imported CLYDESDALE Stallion

KNIGHT OF HARRIS 995

(2811),

The property of H. W. McAFEE, will make the season at Prospect Farm, three miles west of Topeka, Sixth street road.

LINWOOD SHORT-HORNS

W. A. HARRIS, PROP'R, LINWOOD, LEAVENWORTH CO., KAS.

Substance, flesh, early maturity and good feeding quality the objects sought. The largest herd of Scotch Short-horns in the West, consisting of Cruickshank Victorias, Lavenders, Vilets, Secrets, Brawth Buds, Kinellar Golden Drops, etc., headed by Imp. Baron Victor 42824, a prize-winner and sire of prize-winners. LINWOOD—is twenty-seven miles from Kansas City, on Kansas Division Union Pacific R. R. Farm joins station. Inspection invited. Catalogue on application.

HIGHLAND STOCK FARM

RIX & GOODENOUGH, TOPEKA, KANSAS,

Importers and Breeders of English Shire, Clydesdale, Percheron and Cleveland Bay Horses.

Our horses are selected by a member of the firm from the most noted breeding districts of Europe. The lot now on hand have won fifty-four prizes in the old country, which is a guaranty of their superior qualities and soundness. Every animal recorded, with pedigree, in the recognized stud books of Europe and America and guaranteed breeders. Terms, prices and horses that induce people to buy of us. Write for illustrated Catalogue.

Farm and stables four miles southeast of city.



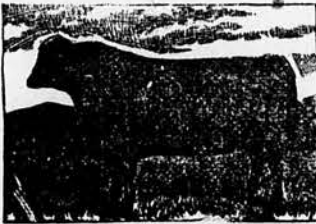
IMPORTERS AND BREEDERS OF ENGLISH SHIRE AND SUFFOLK PUNCH HORSES



STERLING. 4718.

RED POLLED CATTLE.

We have on hand a very choice collection, including a recent importation of horses, several of which have won many prizes in England, which is a special guarantee of their soundness and superiority of form and action. Our stock is selected with great care by G. M. SEXTON, Auctioneer to the Shire Horse Society of England. Prices low and terms easy. Send for catalogues to



Peter Piper (717).

SEXTON, WARREN & OFFORD, Maple Hill, Kansas.

E. Bennett & Son,

TOPEKA, - KANSAS,

The Leading Western Importers of

CLYDESDALE, PERCHERON, CLEVELAND BAY

French Coach Horses.

AN IMPORTATION OF 125 HEAD, Selected by a member of the firm, just received.

Terms to Suit Purchasers. Send for illustrated catalogue. Stables in town.

E. BENNETT & SON.



HOW TO KEEP COOL

TAKE THE

St. Joseph & Grand Island R. R. (UNION PACIFIC ROUTE)

And visit the Pleasure Resorts of Colorado, Utah, Washington Territory, or the Famous Yellowstone Park.

Pullman Palace Sleepers, Modern Day Coaches and Free Family Sleepers, go to make up an equipment which is unexcelled.

NOW IS THE TIME TO GO,

As cheap Tourist Tickets are on sale at all offices. Through Tickets at lowest rates. Sold to all points in United States and Canada.

For full information regarding rates, time, etc., call on or address G. M. CUMMING, FRANK MILLIGAN, General Manager. G. F. & P. A. ST. JOSEPH, MO.

MISSOURI PACIFIC RAILWAY.

DIRECT LINE TO

KANSAS CITY, ATCHISON, ST. JOSEPH, OMAHA and the NORTH. SEDALIA, HANNIBAL, ST. LOUIS and all points EAST. DALLAS, FT. WORTH, AUSTIN, SAN ANTONIO, HOUSTON, GALVESTON, and all principal CITIES in TEXAS and the SOUTH-WEST. PUEBLO, DENVER and the WEST.

Solid Daily Trains with Pullman Buffet Sleeping Cars between Kansas City, Pueblo and Denver via the

COLORADO SHORT LINE

5 DAILY TRAINS | DAILY TRAINS 5 KANSAS CITY TO ST. LOUIS.

H. O. TOWNSEND,

General Passenger and Ticket Agent, ST. LOUIS, MO.

The Burlington System

Of nearly 6,000 miles of steel rail, well-ballasted, with iron and steel bridges, an equipment unexcelled with over 300 passenger trains daily, traversing the great States of Missouri, Illinois, Nebraska, Iowa, Kansas, Colorado, Minnesota and the Territories, with trains made up of Pullman Palace Sleeping Cars, the Burlington's Celebrated Dining Cars, and Improved Modern Free Chair Cars, is unquestionably the Route for travelers to take going East, West or North.

Three Daily Fast Trains between Kansas City, St. Joseph, Atchison, Leavenworth and Quincy, Burlington, Peoria and Chicago without change. Two Daily Fast Trains between Kansas City, Council Bluffs, Omaha, Sioux City, Des Moines, Minneapolis and St. Paul, with no change.

Two Fast Daily Trains between Kansas City, St. Joseph, Atchison and Denver without change. The line carrying the government fast mail between the East and far West. Any ticket agent can give you maps and time table of this well-known route, or you can address H. C. ORR,

Gen'l Southwestern Passenger Agent, Or A. C. DAWES, Kansas City, Mo. Gen'l Passenger and Ticket Agent, St. Joseph, Mo.

BOYS GET YOUR GUN!

NOW IS THE TIME! CHICKENS ARE "RIPE." DUCKS ARE COMING.

We have the Largest Stock of GUNS, RIFLES, REVOLVERS, AMMUNITION ETC., to be found in the West. PRICES GREATLY REDUCED. Send for Catalogue, containing everything needed by SPORTSMEN, which we mail free.

JENNEY & GRAHAM GUN CO., 53 STATE ST., CHICAGO.

DR. OWEN'S BODY BATTERY!

FOR A MAN or WOMAN. Contains 10 degrees of strength. Current can be increased, decreased, reversed or detached at will, and applied to any part of the body or limbs by whole family. Cures General Nervous and Chronic Diseases. It is light, simple and superior to all others. Guaranteed for one year. Our Large Illustrated PAMPHLET giving prices, testimonials, mechanism, and simple application for the cure of disease will be sent FREE to any address.

DR. OWEN BELT CO., 191 State St., Chicago.

Kemp's Double Cam Hay Press given away if it will not fill demands of my circulars.
AMES KEMP, Kempton, Ill.

BURR STONE CHEAPEST & BEST MILL
 SATISFACTION GUARANTEED
 WARRANTED TO GRIND FASTER,
 FINER & BETTER THAN ANY MILL MADE
 4 SIZES: 16, 20, 24 & 30 INCH.
CHAS. KAESTNER & CO.
 303-311 SO. CANAL ST. CHICAGO
 CIRCULAR FREE.

DAVID BRADLEY MFG CO
 RELIABLE
PLOW
 CULTIVATORS
 CHICAGO, ILL.

BUY THE MORRISON PLOW
 BEST USE
 & BEAVIS-SPRING
 CULTIVATOR
MORRISON MFG CO.
 FORT MADISON IOWA

COOK FEED FOR STOCK
 With the **TRIUMPH STEAM GENERATOR** and save 1/4 to 1/2 of your feed. Also **ENGINES & BOILERS, GRINDING MILLS, FEED CUTTERS and CORN SHELLERS.**
 Send for Catalogue A and state what you want.
RICE & WHITAKER MFG CO.
 42 & 44 W. Monroe St., Chicago.

Zinc Collar Pad. Over 3,000,000 of them have been used. The most reliable and durable **P.A.D.** for sore-neck horses or mules. Weather or wear has no effect on their curative properties. We solicit a trial. For sale by all saddlery jobbers. Ask your harness-maker for them and insist on having the **ZINC PAD** and no other.
ZINC COLLAR PAD CO., Buchanan, Mich.

LIGHTNING WELL-SINKING MACHINE MAKERS.
 Well-sinking and prospecting tools sent on trial. \$75 feet has been sunk in 8 hours. Instructions for beginners. An Encyclopedia of 500 Engravings of well and prospecting tools, pumps, wind and steam engines. A treatise on gas and oil. Book free, mailing charges 25 cts. each.
The American Well Works, AURORA, ILLS., U. S. A.

CHAMPION BALING PRESSES.
 Bales one to two tons an hour. Loads 10 to 15 tons in car.
 Double Working. Easy on man and best.
 Uses no doors.
 Send for Circulars with Prices.
FAMOUS MFG. CO., Quincy, Ill.

DELAWARE COUNTY CREAMERY
 -We will pay Freight.-
 Write for our wholesale offer to first purchaser. Address **Delaware County Creamery Co.,** BENTON HARBOR, MICH.

Lightning Hay Press.
 Full circle. Steel. Most rapid and powerful.
 Address **K. C. Hay Press Co.,** Kansas City, Mo.

THE LANE & BODLEY CO., CINCINNATI.
 MANUFACTURERS OF **SAW MILLS AND ENGINES**
 for all purposes. An experience of thirty years permits us to offer the best. Good work at low prices. Send for circular.



Halladay Wind Mill.
 PUMPS, PIPE, WATER TANKS, FEED MILLS, ETC.

Write for catalogue. Address **U. S. WIND ENGINE & PUMP CO.,** 1311 West 12th St., KANSAS CITY, MO.

WARRANTED not to blow down off the tower, and that our **Geared Wind Mills** have double the power of all other mills. Mfrs. of Tanks, Wind Mill supplies, and the Celebrated **CHALLENGE Feed Grinders, HORSE POWERS, CORN SHELLERS, PUMPS and BRASS CYLINDERS**
 Send for Catalogue and Prices.
Good AGENTS WANTED.
CHALLENGE WIND MILL & FEED MILL CO., PATAVIA, KANE CO., ILL.

Well Drills
 FOR EVERY PURPOSE SOLD ON TRIAL.
 Investment small, profits large. Send 20c. for mailing large illustrated Catalogue with full particulars.
 Manufactured by **GOULDS & AUSTIN,** 167 & 169 LAKE ST. CHICAGO, ILLINOIS.

STAR X CANE X MILL,
STUBBS' EVAPORATOR AND **Sugar-Makers' Supplies.**
 For the next 60 days we will sell this celebrated machinery at greatly reduced prices, regardless of profit. Those desiring bargains should send for circular to **J. A. FIELD & CO.,** 8th and Howard Sts., St. Louis, Mo., U.S.A.

THE NEW DOCTOR BAILEY CUTTER.
 For Ensilage and Dry Forage.
 Six sizes, for hand, horse and steam power. Only machine made with a drawing and shearing cut. Great saving of power and increase of capacity. Made only by **AMES PLOW CO.,** Boston and New York.
 Send for circulars and catalogue.

CATTLE FEEDING MACHINE.
 Crushing Corn with Shuck on or off, wet or dry, hard or soft, at the rate of 100 bushels per hour with two horse power. Circulars free. Address **E. A. PORTER & CO.,** Bowling Green, Kentucky.

WHITMAN'S PATENT AMERICUS
 The Best Cider and Wine Mill made. Will make 20 per cent. more cider than any other. Geared outside. Perfectly Adjustable. Prices as low as any first-class mill. Mfrs. of Hay Presses, Horse Powers, Corn Shellers, Feed Cutters, Feed Mills, etc. Send for circulars.
WHITMAN AGR'L CO., St. Louis, Mo.

OPIUM Morphine Habit Cured in 10 to 20 days. No pay till cured.
Dr. J. Stephens, Lebanon, Ohio.

POWER SHELLERS ALL SIZES
HAND SHELLERS ALL SIZES
HORSE POWERS
"TRUMP" DOUBLE POWER SHELLER.
4 & 6 HOLE POWER SHELLER.
"PONY" HAND SHELLER.
 ADDRESS **KEYSTONE MFG. CO. STERLING, ILLS.**
 MENTION THIS PAPER. SEND FOR CATALOGUE

\$400 REWARD FOR A LOAF OF BREAD.
 This sum will be given to the first 70 persons who write and tell us where the word **BREAD** is first found in the Holy Bible, mention book, chapter and verse. The first person who answers this correctly will receive \$75. The second will receive \$50. The third \$30. The fourth \$20. The fifth \$10. To the next twenty if there are as many \$5. will be given if answer is correct. To the next twenty-five people who answer correctly \$3. each. The next twenty who answer correctly \$2. each. If your answer does not arrive in time to entitle you to the first prize, recollect you have 69 chances left. Your chance is good for the first premium if you answer at once, and don't wait for some one more enterprising and diligent to get ahead of you. Each competitor must send with answer \$2. Postage stamps or postal note to pay for one year's subscription to our mammoth **FIRESIDE AND FARM.** A splendid journal chockful of interesting stories short and serial, poems, romances, household, fashion and fancy work notes, amusing articles, condensed notes on art, religion, politics, news, mechanics, literature, agriculture and kindred topics. Our medical department is edited by one of the most able physicians in Mass. All questions pertaining to health, etc. will be answered free of charge by the doctor. Every yearly subscriber is also entitled to a beautiful triple plate Butter Knife or Sugar Shell. These goods are strictly first class and cannot be bought for less than 75c. each at any store. Recollect 50c. pays for all. This offer is open until Jan. 1st. only. Don't wait, write at once. Address **FIRESIDE AND FARM,** 245 Franklin St., Boston, Mass. (P. O. Box 1218.) Please mention this paper.

FARMERS! Save Money by buying Your Groceries of **H. R. EAGLE & CO.,** 68 Wabash Ave., Chicago.

RETAIL GROCERIES	John Clarke, Jr.'s Cotton Thread, per spool. \$04	ALL GOODS ARE GUARANTEED TO BE FIRST-CLASS.	ONE TRIAL WILL SATISFY YOU.
—AT—	Kingsford Silver Gloss Starch, per lb. 05		
WHOLESALE PRICES.	Price's Baking Powder, per lb. 32		
	Church's "Arm & Hammer" Soda, per lb. 03		
	1 doz Good Lead Pencils for. 05		
	4 lbs Very Fine Uncolored Japan Tea. 1 00		
	60 Bars Laundry Soap. 1 00		
	30 lbs Rice for. 1 00		
	All Grades of Teas 25 to 40 per cent. lower than the cheapest retail dealers.		

Send for Price List at Once to **H. R. EAGLE & CO.,** 68 Wabash Avenue, Chicago.

GREAT OFFER!
T. SWOGER & SON, Fine Church and Parlor **ORGANS.**
 DIRECT FROM THE FACTORY AT MANUFACTURERS PRICES. No Such Offers Ever Made.
EVERY MAN HIS OWN AGENT. BOXED IN THE FACTORY. OPENED AT YOUR HOME
 NO MIDDLEMEN. NO WHOLESALE DEALERS. NO AGENTS. NO RETAIL DEALERS. NO CANVASSERS.
 WRITE FOR PARTICULARS, ADDRESS **T. SWOGER & SON, ORGANS,** Beaver Falls, Pa., U. S. A.

AGENTS LOOK HERE
 and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$18 one day, \$76.50 one week. So can you. Proofs and catalogue free.
J. E. SHEPARD & Co., Cincinnati, O.

WELL DRILLING AND BORING MACHINES.
IMPROVED. BEST MADE.
 Because of their DURABILITY, EASE of Operation, and Few and Short Stoppages (a machine earns nothing when the drill is idle).
 Illus. Catalogue Free.
J. E. B. MORGAN & CO., OSAGE, IOWA.

EVERITT'S NEW GOLDEN CROSS WHEAT
 Average yield Golden Cross 1886, - 54.08 Bushels.
 " " Fultz 1886, - 25 "
 " " Golden Cross 1887, - 51 "
 " " Fultz 1887, - 30 "
 Above were in ordinary field cultivation. Yield for 1888 can not be computed yet, but Golden Cross is far ahead of Fultz in stand and size of head. The highest yield reported is 56 bu. per acre. Large, hard, red grain, compact broad head, light bearded, stands very hard winters on exposed ground. This is one of its strongest points. Grows a large, strong straw and ripens early. It is such a great stouter and hardy winter sort that 1 1/2 bu. per acre is enough seed on the most exposed situations, and 1 bu. on favorable soil. The Golden Cross is the coming wheat. We guarantee the seed will be eagerly bought up next year wherever introduced at \$2 per bu. or more. Nothing can hinder this, as every farmer will fall in love with it as soon as they see it growing. The wise farmer will order early. His sloopy neighbor will wait and buy from him next year at nearly the same price. Introductory price, 1-4 bu. \$1, 1-2 bu. \$1.75, 1 bu. \$3, 2 1/2 bu. \$6. Or by mail, post-paid, 1 lb. 40c, 5 lbs. \$1, 4 lbs. \$1.55. We are headquarters for best kinds of seed wheat. Valuable Wheat Catalogue free. **J. A. EVERITT & CO.,** Seedsman, Indianapolis, Ind.

DR. WHITTIER,
 10 West Ninth St., KANSAS CITY, MO.

The leading and most successful Physician, Surgeon and Specialist in the West, and the **OLDEST, ORIGINAL AND ONLY DR. WHITTIER** in Kansas City.
DISEASES of the BLOOD and SKIN,
 As Scrofula, Rheumatism, Gout, Eczema, SYPHILIS, Etc., causing ulcers, eruptions, pain in bones, swelling of joints, enlarged glands, mucous patches in mouth, falling hair, and many other symptoms, are quickly removed, and all poison thoroughly and permanently eradicated from the system by purely Vegetable Treatment.
NERVOUS DEBILITY,
 Spermatorrhoea, Impotency, etc., resulting from youthful indiscretions, excess in matured years, and other causes, inducing some of the following symptoms, as dizziness, confusion of ideas, defective memory, aversion to society, blotches, emissions, exhaustion, etc., are permanently cured.
URINARY, KIDNEY & BLADDER troubles. Weak Back, Incontinence, Gonorrhoea, Gleet, and Stricture, are quickly and perfectly cured.
Consult DR. WHITTIER
 In person or by letter, and time will be gained, money saved and years of suffering averted.
REMEMBER: DR. W. promises nothing that he can't do, and GUARANTEES, and that age, integrity and life-long experience do not justify. Medicines sent any where by mail or express, secure from observation. Consultation free and in visited. Office hours, 9 to 5.7 to 8; Sunday, 10 to 12. Send stamp for Sealed Pamphlet. No cure, no pay. Address, **H. J. WHITTIER, M. D.,** 10 West Ninth Street, Kansas City, Mo.

TWO-CENT COLUMN.

"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion. Initials or a number counted as one word. Cash with the order.

WANTED—A good farm hand; must be a good milker. Also, a man and wife without children, to work on farm—wife to do house-work. Steady work and good pay. Wm. Booth, Jr., Winchester, Kas.

STOCK FOR SALE OR TRADE FOR CATTLE.—Two young stallions, 4 years old, extra bred and tried breeders; one 8-year-old jack—best of stock; one 6-year-old Aberdeen-Angus bull—splendid pedigree. Also, younger stock for sale. Address D. H. Hartsock, Marshall, Mo.

WAGON SPRINGS—The best and cheapest on earth, for \$3.00. Capacity 1,600 to 4,500 pounds, according to size. Any farmer can put it on. Send money and width of bolster, inside of standard, over iron. American Bolster Spring Co., 230 N. Commercial St., St. Louis, Mo.

STRAYED OR STOLEN—From Osage City, Kas., one dark bay mare pony, 18 hands high, blind in right eye, branded on left shoulder and hip with Spanish brand, about 8 years old. When last seen had on a halter with rope attached. A reasonable reward will be paid for the return of the pony or any information leading to her recovery. Address Thomas Flemming, Osage City, Kas.

FOR SALE OR TRADE—Ten head of well-bred horses, from 1 to 7 years old. Some roadsters and draft or general purpose. Mostly mares, standard-bred or standard-producers—those old enough bred to a standard horse this season. Also buggies, road-carts, breaking carts, etc. Am going out of the business. Will sell low for cash or good paper, or will exchange for good country or city real estate. Would also offer a business house in the town of Rossville 30x50 feet, warehouse on rear of lot 20x30 feet, shelving, counters, etc. Here is a bargain for thirty days, sure. All clear. J. Richmond, Fairview Stock Farm, Topeka, Kas.

WANTED—Horses in exchange for some beautiful lots—clear—just west of city, and acre tract near cotton mill. Also good 80 acres, well improved, thirteen miles from Topeka, for trade. Call, or address A. M., 521 Quincy St., Topeka.

FOR SALE—Registered Short-horn Bull, 3 years old, color red, dehorned, docile. Also choice high-grade Bull and Heifer Calves and some yearling Heifers. Will sell low. Address T. H. Rudiger, Lawrence, Kas., or call at farm, four miles west of Lawrence, on California road.

J. W. HALL, Garnett, Kas., has for sale at a bargain a trio of two-year-old Langshans; also Langshan cockerels and pullets. Write for prices.

WANTED—TO BUY SUNFLOWER SEED.—Send samples. J. G. Peppard, 1220 Union Ave., "Station A," Kansas City, Mo.

FOR SALE OR TRADE—Twenty-five head of choice Short-horn cattle, good color, well-bred. Address J. C. Neal, Myers Valley, Pottawatomie Co., Kas.

DEHORNING CATTLE AND SPAYING PIGS.—Orders solicited. Frank Jordan (Drawer B), Topeka, Kas.

FOR FREE INFORMATION—Concerning cheap Farms and City Property in the best part of Missouri, address Simmons & Co., Monroe City, Mo.

\$100,000 WORTH OF HARDWARE TO exchange for unencumbered city or farm property. Call on me at 118 Sixth Ave. West. J. H. Dennis, Topeka, Kas.

FOR TRADE—Fine improved and deeded Farm Land in Lane county for small suburban place with fruit near town in eastern Kansas or western Missouri. Address M. E. Graham, Manhattan, Kas.

TEXAS BLUE GRASS SEED AND SETS—For sale. The greatest winter and earliest spring grass ever known. Send for circulars. Carlos Reese, Marion, Alabama.

FOR SALE, GERMAN CARP—For stocking ponds. Write for prices, very low, according to size. Cans furnished and returned at my expense. R. B. Moore, Oketo, Kas.

FOR SALE—A number of choice young Short-horn Bulls, from 8 months to 2 years old. Thos. P. Babst, Dover, Kas.

WANTED—CREAM CLUBS.—Form a cream club among your neighbors and express your cream instead of making butter. Highest cash price paid. Write for particulars. M. Madison, P. O. Box 79, Topeka, Kas.

100,000 THREE BEST SORTS TIMBER—Claim Trees for sale by Martin Allen, Hays City, Kas.

CHOICE LOTS—In Boynton's addition to Topeka to exchange for a farm. West Side circle railway runs through the addition. Convenient to cotton factory, sugar mill and creamery. D. J. Boynton, 626 Kansas avenue, room 5, Topeka.

DEHORNING CATTLE.—Tools \$1.50 prepaid. 23-page book particulars 10c. I. J. Wicks, Colorado Springs, Colorado

FOR SALE—Jersey and Holstein-Friesian registered Bulls, 1 year old, or will exchange for saddle mare, color chestnut or black. 15½ hands high. Address John Milburn, Fort Scott, Kas.

FOR SALE—A five-room house at slaughter prices, for half what it is worth. If you wish to make money, call on D. J. Boynton, 626 Kansas avenue, room 5.

FOR SALE OR TRADE—Eighty acres of land in Woodson county, within ten and a half miles of Toronto; sixty-five acres under cultivation. For particulars address Robert Ritchie, Peabody, Kas.

WE SELL—Only warranted goods. Any society badge, 62 cents; charm, 87 cents; collar-button, 28 cents. Standard gold plate. Charles H. Williams & Co., Manufacturing Jewelers, Attleboro, Mass.

FOR SALE—Great bargains in Boynton's addition to Topeka. Parties are doubling their money buying lots in this addition. The cotton factory is going up fast. Call on D. S. Boynton, 626 Kansas avenue, room 5.

STRAYED—From Martin Finney, Fourth and Jefferson streets, Topeka, a light roan mare, with silver tail and mane, shod in front and branded on left hip. Liberal reward.

FOR SALE—Pure Plymouth Rock eggs. J. D. Jencks, 411 Folk street, North Topeka.

TWO-CENT COLUMN--(Continued.)

FOR SALE—All kinds of Turnip Seed. Raise turnips to feed your stock. Trumbull, Reynolds & Allen, Kansas City, Mo.

STRAYED—On March 31, 1888, from Pinkerton place, south of Elevator school house, one bay three-year-old filly, a scar on left hind leg, and had halter on. Also a one-year-old brown horse colt. A liberal reward for their recovery. S. W. McKnight, Topeka, Kas.

TO EXCHANGE—Timber Claim for Jersey Cattle. Box 143, St. Francis, Kas.

WANTED—The address of canvassers who want employment—at home or abroad, ladies or gentlemen. Lock Box 79, Marion, Kas.

HOLSTEIN-FRIESIAN (AMERICAN).—Four Bull Calves for sale. Wm. A. Travis & Son, North Topeka, Kas.

WRITE US FOR PRICES—Of Seed Buckwheat, Bye, Turnip Seed, and anything in the seed line. Trumbull, Reynolds & Allen, Kansas City, Mo.

RED CEDARS A SPECIALTY. G. W. Tineher, Topeka, Kas.

WILL EXCHANGE—Extra fine Bull Calf, registered Short-horn. Also two for sale. C. V. N. House, Spring Hill, Johnson Co., Kas.

PATENTS.—J. C. Higdon, Solicitor of Patents, Kansas City, Mo., and Washington, D. C. Sample copy patent, instructions, references, free.

FOR SALE AT A BARGAIN—The best improved 230-acre farm in Rawlins county, Kansas, together with stock, crops and machinery, on account of health of owner. Address H. J. Browne, Atwood, Kas.

FOR SALE—Light Brahma, Langshan and Wyandotte Cockerels and Pullets. Cheap for quality of stock. Express rates low. M. D. Mulford, Guide Rock, Neb.

J. M. SLONAKER—Garnett, Kas., has for sale one J. Benick Rose of Sharon and one Bloom Bull, both richly bred. Write for pedigree and terms.

FOR SALE—A fine young Holstein Bull, 16 months old, from imported dam; finely marked. Address C. A. Tyler, Burtrton, Kas.

BARTHOLOMEW & CO., Real Estate and Loan Brokers, 189 Kansas avenue, Topeka, Kas. Write them for information about Topeka, the capital of the State, or lands, farms or city property.

FOR TRADE—Farm of 159 acres; 50 acres under cultivation; 145 acres tillable; in Cowley Co., Kas. Will trade for blooded horses—Norman or Cleveland Bays preferred. Address B. L. Wilson, Atlanta, Kas.

FOR SALE—160 Acres; all fenced and cross-fenced; two good barns, horse stable, granary will hold 2,000 bushels, carriage house, corn crib; a large variety of fruit trees in bearing; six-room house, nearly new. Four and a half miles from Stafford. Price \$4,500—\$700 four years at 7 per cent. C. G. McNeil, Stafford, Kas.

WANTED—To crop with some farmer to raise Broilcorn and manufacture into brooms, or will rent small farm, everything furnished; no crop will pay as well. S. Pottenger, Kankakee, Ill.

I. S. BARNES—Blue Mound, Kas., has for sale registered Holsteins. Terms to suit.

A Public Sale! Thursday, Sept. 27, 1888, At 1 o'clock p. m., I will offer at public auction at my place, known as the Barr farm, five and one-half miles southeast of Garnett and two miles northwest of Bush City, the following

SHORT-HORN CATTLE: Twenty Cows and Heifers, twelve Cows with calves by their side, eight yearlings and two-year-olds. Principally Duchesne and Bates blood. Two Bulls for sale—well-bred. TERMS:—Six months time without interest, if paid when due; otherwise 12 per cent. from date. F. H. SEVERANCE, GARNETT, KAS.

HUGH E. THOMPSON, BROOMCORN Commission and Dealer in Broom-Makers' Supplies. Reference:—National Bank of Commerce. 1412 & 1414 Liberty St., Kansas City, Mo.

10,000 AGENTS WANTED TO SELL OUR CAMPAIGN BIOGRAPHIES Will be first out. BEST, CHEAPEST, and go like wildfire. Secure territory at once. Address HUBBARD BROS., Kansas City, Mo.

Some Valuable Papers CLUBBED WITH KANSAS FARMER: The Breeder's Gazette, price \$3.00—both. \$3.00 The Topeka Weekly Capital, price \$1.00—both. . . . 1.50 The Topeka Weekly Commonwealth, price \$1.00 —both. 1.50 The Weekly Kansas City Times, price \$1.00—both 1.75 Scribner's Magazine, price \$3.00—both. 3.50 KANSAS PATENT OFFICE, LEHMAN & CONE, 316 N. Main St., Hutchinson, Kas. Twenty years experience as Patent Attorneys. Will devote exclusive attention to encouraging and developing Kansas inventions. Owners and inventors of Kansas patents will save time and money by conferring with us. "Genius is wealth."

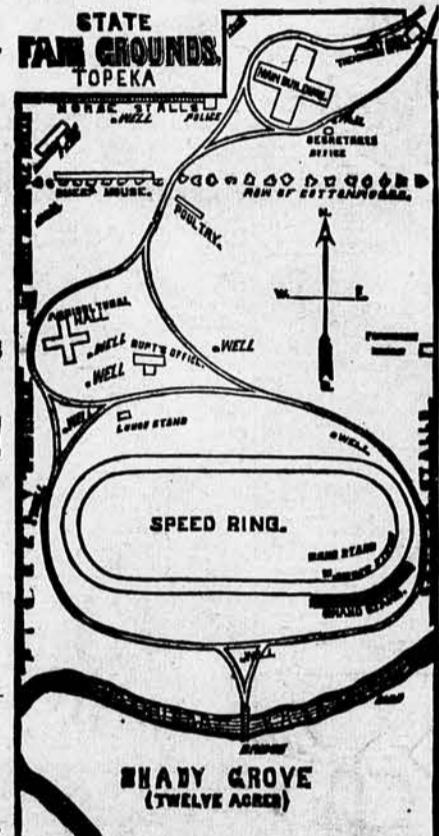
GUNS REVOLVERS. Send stamp for price list to J. H. Johnston & Son, Pittsburg, Pa.

SEEDS J. G. PEPPARD, 1220 UNION AVENUE. (One block from Union Depot) KANSAS CITY, MO.

SIXTH ANNUAL KANSAS STATE FAIR!

TO BE HELD AT TOPEKA, KANSAS SEPTEMBER 17, 18, 19, 20, 21 and 22, 1888. \$25,000 IN PREMIUMS.

GREATEST SHOW OF 1888! REPRESENTING THE PRODUCTS OF AN EMPIRE! The Whole STATE OF KANSAS. More and Greater Attractions than ever. REDUCED R. R. FARE.



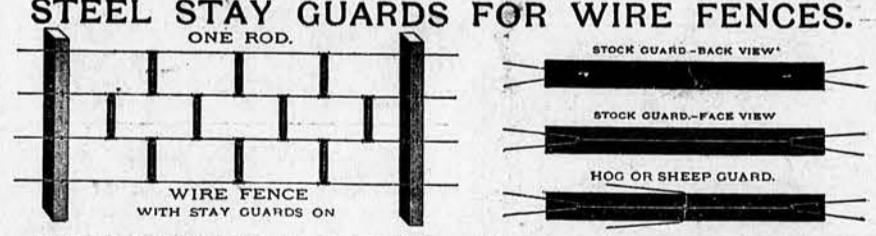
\$25,000.00 FOR Fair Ground IMPROVEMENTS. CITY WATER SERVICE. Electric Light! NEW HORSE BARNS, CATTLE BARNS, ART HALL Machinery Hall, Amphitheater. Finest Fair Ground and Speed Ring IN THE WEST

For information and Premium Lists, address E. G. MOON, Secretary, TOPEKA, KANSAS.

J. L. STRANAHAN, DEALER IN BROOMCORN And all BROOM MATERIALS AND MACHINERY.

Twenty-five years experience as a Manufacturer and Wholesale Dealer. Liberal advances on consignments. References:—Hide & Leather Nat'l Bank, Chicago. 194 Kinzie St., Chicago, Ill.

COTSWOLD AND SHROPSHIRE SHEEP. Imported and home-bred, of different ages—the farmer's general-purpose sheep. Spring crop of lambs, both breeds, very promising. Also Merino Sheep for sale—To settle the estate of R. T. McCulley—L. Bennett, administrator, who is authorized to sell at private sale, in numbers to suit purchaser. Short-horns—Choice young animals, of both sexes, by Renick Rose of Sharon sires. Bronze Turkeys and Plymouth Rock Chickens, pure breeds. Also Berkshire Hogs.—For prices or catalogue, address U. P. BENNETT & SON, Lee's Summit, Mo.



Can be attached easily to Smooth or Barbed Wire Fences, by any one. Recommended STRONGLY by Farmers, Breeders and Agricultural Journalists. Will not SHIFT on Fence Wires. Made of Fine, Springy Steel, Japanned Jet Black, are 13½ inches long and 1½ wide; flexible, light, very strong and cheap. With smooth No. 9 wire, will make a CHEAP fence, easy to see, impossible to break and lasting a lifetime. "Stock" Guards are for fences with wires 9½ to 13 inches apart. "Hog" or Sheep Guards for use on wires 5 to 6½ inches apart. Stock Guards, \$15; Hog Guards, \$17 per 1,000. Discount to dealers. If not for sale in your town, write WIRE FENCE IMPROVEMENT CO., 325 Dearborn street, CHICAGO.

SEEDS Everybody wants the earliest BUY NORTHERN GROWN SEEDS

850,000 GRAPE VINES 100 VARIETIES. Headquarters of the MOYER. The Earliest and Best, Reliable Red Grape now first offered under seal. Also Small Fruits, Trees, Etc. Three Sample Vines mailed for 15 cents. Descriptive Price List free. LEWIS ROESCH, Fredonia, N. Y.