

# KANSAS FARMER

ESTABLISHED IN 1863.  
VOL. XXXIV. NO. 49.

TOPEKA, KANSAS, THURSDAY, DECEMBER 3, 1896.

SIXTEEN TO TWENTY  
PAGES—\$1.00 A YEAR.

## TABLE OF CONTENTS.

PAGE 770—AGRICULTURAL MATTERS.—Proceedings. Seeding Prairie Pasture. Management of Manure—Stands Up for Kansas. Grasses for Oklahoma.  
PAGE 771—AGRICULTURAL MATTERS (continued).—Wild Grasses Again. Page Fence. The Stock Interest.—Swine Plague Remedies. How Change Color of Holes? How to Make a Sheep Fence.  
PAGE 772—IRRIGATION.—The High Plains of Western Kansas. Irrigation in Illinois.... Gossip About Stock.  
PAGE 773—THE FAMILY DOCTOR.—Anesthesia and Surgery.... Publishers' Paragraphs.  
PAGE 774—THE HOME CIRCLE.—How the Sunflowers Came (poem). Library Fireplace. House-Hunting Made Easy. Blanche Sherman. A Womanly Quality. Children's Diet. A Purse Protector. Silk Covers for Quilts. How to Keep the Eyes Bright. Nice Outlet for Invalids.  
PAGE 775—THE YOUNG FOLKS.—I'll Do What I Can (poem). Boys' Fire Department. Dog Kills Himself. A Swallow's Swift Flight. Shooting Seed Pods. Drives a Milk Wagon.  
PAGE 776—EDITORIAL.—Those Eastern Detractors of Kansas. White and Yellow Corn. Home-Made Incubator. Kansas Improved Stock Breeders.  
PAGE 777—EDITORIAL.—Beet Sugar Notes. Kansas Dairymen's Resolutions. Farmers' Institutes. Santa Fe Road Establishes an Industrial Department.  
PAGE 778—HORTICULTURE.—Observations on the Care of Fruit Trees. State Horticultural Society. Liver a Protection Against Rabbits.  
PAGE 779—IN THE DAIRY.—Asked and Answered. Gathered From Many Sources.  
PAGE 780—THE APRIARY.—Candy for Feeding Bees. Mice-Proof Hives.  
PAGE 781—THE VETERINARIAN.... Market Reports.  
PAGE 782—THE POULTRY YARD.—Keep 'Em Scratching. Foods for Poultry. The Hens in Winter. A Good Male Parent.

## BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeder's Directory for \$15 per year or \$8 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.—CLYDESDALE STALLIONS, SHORT-HORN CATTLE, POLAND-CHINA HOGS. Write for prices of finest animals in Kansas. H. W. MCAFEE, Topeka, Kas.

### CATTLE.

T. H. PUGH, Maple Grove, Jasper Co., Mo., breeder of HEREFORD CATTLE. Stock for sale.

VALLEY GROVE HERD OF SHORT-HORNS.—For sale, choice young bulls and heifers at reasonable prices. Call on or address Thos. F. Babst, Dover, Kas.

FAIRVIEW STOCK FARM.—Registered Short-horn cattle. 7th Earl of Valley Grove 111907 at head of herd. Young stock for sale. E. H. Littlefield, Newkirk, Oklahoma.

ENGLISH RED POLLED CATTLE AND COTSWOLD SHEEP. Young stock for sale, pure-bloods and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Buckner 100668 at head of herd. Registered bulls, heifers and cows at bed-rock prices. Address D. P. Norton, Council Grove, Kas.

### SWINE.

Holstein-Friesians. M. H. ALBERTY, Cherokee, Kansas.

TEN POLAND-CHINA BOARS—\$10 to \$20 apiece. J. H. Taylor, Rhinehart, Kas.

K. N. FRIESEN, ALTA, KAS.—Proprietor of the Garden Valley Herd of Thoroughbred Poland-China swine. Selected from best strains. Stock for sale at all times. Write me. Mention FARMER.

V. B. HOWEY, Box 103, Topeka, Kas., breeder and shipper of thoroughbred Poland-China and English Berkshire swine and Silver-Laced Wyandotte chickens.

CENTRAL KANSAS HERD OF THOROUGHbred Poland-China hogs. C. S. Snodgrass, Galt, Rice county, Kansas, breeds the best. Stock for sale now. Come or write.

OHIO IMPROVED CHESTER SWINE.—Pure-bred and registered. One hundred spring pigs at hard times prices. Also a few boars ready for service. H. S. DAY, Dwight, Morris Co., Kas.

POLAND-CHINAS FOR SALE.—Twenty-five top spring pigs, gilts and boars. A few runs of each of the following breeds: Cotswold, Shropshire and American Merinos. Also Scotch Collie pups. Address H. H. Hague & Son, Walton, Kas.

D. TROTT, ABILENE, KAS., headquarters for the famous Duroc-Jerseys. Mated to produce the best in all particulars. Choice breeders cheap. Write.

### SWINE.

WM. PLUMMER & CO., Osage City, Kas., breeders of Poland-Chinas of the best families. Also fine poultry. Pigs for the season's trade sired by five different boars.

FOR SALE—Duroc-Jersey pigs; also Poland-China. Bronze turkeys. Toulouse geese, Pekin ducks, Barred Plymouth Rock and Brown Leghorn chickens. Ready to ship out. J. M. Young, Colfax, Kas.

PRINCETON HERD OF POLAND-CHINA SWINE contains the most noted strains and popular pedigrees in the U. S. Choice animals for sale. Address H. Davison & Son, Princeton, Franklin Co., Kas.

ASHLAND STOCK FARM—Will sell for the next thirty days, thoroughbred Poland-China boars and B. P. Rock cockerels at greatly reduced prices. No boom prices here. Give me a trial and I will surprise you with prices for quality of stock. Yours for business, M. C. Vansell, Muscotah, Atch on Co., Kas.

### POULTRY.

HIGH-SCORING BARRED PLYMOUTH ROCKS. H. White Wyandottes and Rose-comb Brown Leghorns of the very best strains obtainable, for sale low. Score-card by Hewes or Emery with each fowl sold. Write wants. P. C. Bowen & Son, Cherryvale, Kas.

Barred Plymouth Rocks. All the leading strains. Thirty young cockerels and twenty-five pullets for sale. A 93-point bird at head of the hatch. Eggs \$2 per setting of thirteen. S. McCullough, Ottawa, Franklin Co., Kas.

## 1896 Hatch Ready to Ship.

I will continue to sell birds at from 50 cents to \$1 each until my flock is disposed of. Partridge Cochins, S. S. Hamburgs, Brown and White Leghorns, Barred and White P. Rocks, Light Brahmas, and cockerels of Buff Leghorn and Buff P. Rocks. Single birds \$1 each. My fowls have unlimited range and are hardy, well-matured and strictly first-class thoroughbred birds. A. H. DUFF, Larned, Kas.

**Round Top Farm**  
PRAIRIE STATE INCUBATORS.  
Plymouth Rocks, Light Brahmas, Langshans, Indian Games, Buff Leghorns, Bantams. Eggs \$2 per fifteen; \$3.50 per thirty. Forty-page catalogue, 10 cents, treats on artificial hatching, diseases, etc.  
Fred B. Glover, Parkville, Mo.

LICE KILLER. Don't pay 50 and 75 cents per gallon for lice killer. I will send you a recipe for 50 cents to make it at a cost of about 25 cents per gallon. For killing lice by painting roosts, boxes, etc., it has no superior. The best disinfectant and disease preventive out.  
A. H. DUFF, Larned, Kas.

### SWINE.

BERKSHIRES. H. B. COWLES, Topeka, Kas.

BOURBON COUNTY HERD BERKSHIRES. J. S. Magers, Proprietor, Arcadia, Kas. Correspondence invited. Satisfaction guaranteed.

BERKSHIRES. We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders.

WM. B. SUTTON & SON, Russell, Kansas.

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

BLUE MOUND HERD BERKSHIRE SWINE. Herd boars Barkis 30040, Victor Hugo 41709. One hundred head. Young sows, boars and gilts for sale. Allen Thomas, Blue Mound, Linn Co., Kas.

SELECT HERD OF BERKSHIRES. For ten years winners at leading fairs in competition with the best herds in the world. Visitors say: "Your hogs have such fine heads, good backs and hams, strong bone, and are so large and smooth." If you want a boar or pair of pigs, write. I ship from Topeka. G. W. Berry, Berryton, Shawnee Co., Kas.

WYNDALE FARM HERD. Registered Berkshires and B. P. Rock Chickens. Only the best stock for sale. Eggs in season. Correspondence solicited.

M. S. KOHL, Farley, Sedgwick Co., Kansas.

### SWINE.



J. T. LAWTON (successor to John Kemp), NORTH TOPEKA, KAS., breeder of Improved Chester White swine. Young stock for sale. Also Light Brahma fowls.

## BELMONT STOCK FARM

Geo. Topping, Cedar Point, Kansas.

Breeder of English Berkshire and Poland-China swine, S. C. Brown Leghorns, B. Plymouth Rocks, Mammoth Bronze turkeys and Imperial Pekin ducks. Write for prices. Farm six miles south of Cedar Point, Chase county, Kansas.



W. S. ATTEBURY, Rossville, Kansas, DEALER IN Chester Whites Exclusively. Visitors always welcome.

## THE WORLD'S FAIR HERD

Of pure-bred POLAND-CHINAS are giving splendid satisfaction. I am selling tops 8 months old for \$12, either sex. Wilkes, Corwin and Tecumseh blood combined. Write. E. W. REYNOLDS, Madison, Greenwood Co., Kas.

## PLEASANT VALLEY HERD REGISTERED POLAND-CHINASWINE

Westphalia, Anderson Co., Kas.

Breeder of high-class pedigree Poland-China swine. Herd headed by Guy Wilkes 3d 12131 C. Guy Wilkes is now for sale, also fifty choice April pigs. Write. E. A. BRICKER.

## Standard Herd of Poland-Chinas.

L. NATION, Proprietor, Hutchinson, Kansas. The breeding herd consists of the best strains of blood, properly mated to secure individual excellence. Stock for sale. Visitors welcome. Correspondence invited.

## Kansas City Herd Poland-Chinas

The future villa of Hadley Jr. 18314 O., the greatest boar of his age. I have pigs for sale now by Hadley out of Tecumseh Mortgage Lifter 32649 S. Order quick and orders will be booked as received. Farm nine miles south of Kansas City, on Ft. Scott & Memphis R. R. Postoffice Lenexa, Kas.

W. P. GOODE, Proprietor, Lenexa, Kas.

## Farmington Herd Poland-Chinas

Twenty-five spring boars sired by Little Mc. 14962 S. by Mo. Wilkes 9242 S.; Trinidad 30057 A. and Chief Kankalska by Chief Tecumseh 2d 9115 S. All stock guaranteed as represented. D. A. KRAMER, Washington, Kas.

## TOWER HILL HERD Registered Poland-Chinas.

175 head, 30 brood sows. Herd boars are Black Stop 10550 S.; U. S. Butler 13388 S.; George Free Trade 21033 A., and a grandson of J. H. Sanders 27219 O. Young boars ready for service and bred gilts for sale. B. R. Adamson, Fort Scott, Kas.

## LARGE ENGLISH BERKSHIRES.

Twenty boars, fifty sows for sale. Largest herd of registered Berkshires in Kansas. The 1,025-pound boar Longfellow W. 33611 at head of herd who, with his get, won more first premiums at Kansas State fair this year than any boar of any breed. Five herds Berkshires competing, won six first and three second premiums. Prices reasonable. Write for what you want. Also bred HEREFORD CATTLE.

C. A. STANNARD, HOPE, KAS.

## POLAND-CHINA SWINE.

We offer a fine line of brood sows, bred or not, as wanted, at prices in keeping with the times. Our gilts are the get of Upright Wilkes and J. H. Sanders Jr. We will also sell a number of our herd sows; they are bred and registered. Some choice sows bred to Klever M. and some to Medium Pride. We will also sell Upright Wilkes or J. H. Sanders Jr. A rare opportunity to get excellent stock at low prices. J. R. KILLBOUGH & SONS, Richmond, Franklin Co., Kansas.

WILLIS E. GRESHAM, Quality Herd Poland-Chinas, HUTCHINSON, KAS. Seven prizes World's Fair. Three on litter under 6 months. More than any breeder west of Ohio. Ten prizes Kansas State, twelve Oklahoma State, and four out of six in Texas in 1896. More than any single breeder this season. Darkness F. 73222 and Darkness B. 3d 23508, Bessie Wilkes 36837, and the sensational sweetstake and first class winner of 1896. Bessie U. S. (Vol. 11 S. H.), one of the best sows living to-day. Darkness Quality 14861, Guy Unfortunate 29295, Darkness Quality (Vol. 11 S. H.), first in class in Kansas and Oklahoma and in herd in three States. Some good ones for sale, both sexes. Write me. Boz 14.

WILLIS E. GRESHAM, Hutchinson, Kas.

### CATTLE.

## IDLEWILD HERD SCOTCH SHORT-HORN CATTLE

A choice lot of young bulls and heifers for sale. Also pedigree Poland-China swine. Geo. A. Watkins, Whiting, Jackson Co., Kas.

## SHANNON HILL STOCK FARM

G. W. GLICK, ATCHISON, KAS.

Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Winsome Duke 11th 115137 and Grand Duke of North Oaks 11th 115736 at head of the herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

### SWINE.

## Thoroughbred Duroc-Jersey Hogs

Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. STONEBRAKER, Panola, Ill.

## Franklin County Herd Poland-Chinas.

Twenty boars ready for service, also twenty sows for ready sale at prices to suit the times. Inspection and correspondence invited. E. T. Warner, Owner, Princeton, Kas.

## Duroc-Jersey March Boars

Large size, heavy bone, good colors, highly bred, all registered, ready for service, shipped for inspection. You see them before you pay for them. Describe what you want and don't fail to get description and prices. J. D. STEVENSON, New Hampton, Harrison Co., Mo.

## ROYAL HERD

Poland-China Hogs and Barred Plymouth Rock Chickens. My stock took first premium at the State fair this fall. Have a good line of hogs and chicks for sale. WARD A. BAILEY, Wichita, Kansas.

## LAWN RIDGE HERD

## Poland-Chinas.

130 head, all ages. 100 spring pigs, sired by Young Competition 15082 S., Kansas Chip 15083 S. and a grandson of J. H. Sanders. Write or come. J. E. Hoagland, Whiting, Jackson Co., Kas.

## DIETRICH & SPAULDING,

Richmond, Kansas. Home of the Poland-China Prize-Winners.

Don't be too late. Only a few choice boars left but prices remain right. Some fancy gilts now safe in pig to the prize-winner, Silver Chief. Don't miss this chance—only a few gilts bred to Noxall Wilkes this season. Write us soon.

## Clover Leaf Herd Poland-Chinas.

We Have the Best. Nothing Else. J. H. Sanders Jr. 14953 S. 35089 O. heads our herd. Three of his get sold for \$800; entire ket at sale averaged over \$200; get during his term of service exclusive of public sale brought over \$2,700. Thirty-eight pigs getting ready to go out. Among our 14 brood sows are Black Queen U. S. Corwin 28801 S., Silver Bar U. S. 30884 S., Black Queen Hadley 1st 36574 S., Annie Black Stop 38631 S. and Ruby Rustler 4th 36355 S. Write or, better, visit the herd. G. HORNADAY & CO., Fort Scott, Kas.

## NEW

## MULE AND HORSE

## MARKET.

23d and Grand Ave., Kansas City, Mo.

We announce our entire removal to Twenty-third and Grand, where we will be found in future, ready to buy or sell mules and horses.

## SPARKS BROS.

We will remove our entire horse and mule business to Twenty-third and Grand Ave., about October 10. Highest cash price paid for horses and mules. All car lines transfer to Westport line, which passes our door.

## OTTINGHAM BROS

Other Stables of equal or greater capacity ready soon.

## Agricultural Matters.

### PROCEEDINGS

Of the Convention of the Association of American Agricultural Colleges and Experiment Stations.

By a Member of KANSAS FARMER Editorial Staff.

The tenth annual convention of the above-named association was held at Washington, D. C., November 10 to 12. As the title indicates, it is composed of representatives from the agricultural colleges and experiment stations throughout the Union. Each college and each station can send as many delegates as it pleases, all of whom can partake in the deliberations, but only one representative from each can vote.

The object of the association, in a general way, is to consult over matters of common interest, to devise ways and means whereby the institutions represented can become more useful to their constituents, and thus to better fulfill the ends for which they were established. The real benefit of the conventions lies chiefly in the opportunity they afford for the teachers and scientific workers to exchange ideas, to gather enthusiasm from each other, to learn what others are doing in the same lines of work in which they are engaged, especially in original investigations, all of which give the strongest impulse to more thorough and conscientious work on the part of those who attend. Your correspondent maintains, from what he has seen at this and other similar conventions, that it would be money wisely invested by the several colleges and experiment stations to send not only one delegate each, but to send all their leading teachers and investigators. The comparatively trifling expense this would involve would be repaid many times in the quantity and quality of the work of those who had the privilege of rubbing against their confreres in other institutions.

To facilitate the work of the annual convention, the association is divided into the following sections: Agriculture and chemistry, college work, horticulture and botany, mechanic arts, entomology. The work of each section is indicated by its title.

The management of the association as a whole is in the hands of the President, assisted by an Executive committee who designate the time and place of meeting and arrange the general program. But each section has its own officers, consisting of a Chairman and a Secretary, provides its own program, and holds its meetings apart from the rest, and can thus devote itself exclusively to the particular line of work it represents.

The convention was presided over by the venerable and veteran scientist, Dr. Samuel W. Johnson, Director of the Connecticut State Experiment Station, but better known to the public as the author of the two noted books on agricultural chemistry, "How Crops Grow" and "How Crops Feed." Your own State has been honored by the election of Dr. Geo. T. Fairchild, President of the Kansas State Agricultural college, as President of the association for the ensuing year.

There was a fairly good attendance. Nearly all land-grant colleges and agricultural experiment stations on the continent were represented. Your Kansas college and station were represented by President Fairchild, named above, Prof. S. C. Mason and Prof. C. C. Georgeson, the latter being chairman of the section on agriculture and chemistry.

The measures of general interest which were adopted were, (1) a uniform standard of admission to the freshman year in the colleges; (2) a tentative course of study for which the degree of bachelor of science should be granted, and (3) a measure looking to the uniformity in station nomenclature, or, in other words, an agreement as to the meaning of certain names and adjectives which are frequently used in connection with the work of instruction and the investigations of station workers. A strenuous effort was made, chiefly by a few Eastern college Presidents, to change the name of the association, so as to bring in the word "Mechanics"

or "Mechanical" as part of the title. In the somewhat animated discussion which this occasioned, the President of the Maine Agricultural college had the temerity to state that the term "agricultural college" was a misnomer; that the land-grant colleges were not and never were intended to be and ought not to be "agricultural" colleges. The incident is of interest as showing the direction in which some of these institutions are drifting.

The papers presented in the several sections constituted the most interesting work of the convention. In the section of college work, Dr. Fairchild, of Kansas, read a paper on "What Shall Be Taught in Our Colleges of Agriculture?" It was an able plea for a broad and thorough scientific training of the mind, supplemented by such a course of manual training as should teach hand and mind to co-operate in applying and fixing the instruction of the class-room. He was followed by President Goodell, of Amherst (Mass.) Agricultural college. He was of the opinion that the agricultural college should confine its instruction strictly to agriculture and the underlying sciences. There were abundant opportunities for young people to get instruction in literary and technical lines in other institutions, and that it was a perversion of the funds granted by the general government to put them to other uses than those indicated in the organic law. Other papers on the same subject followed.

In the section on agriculture and chemistry, Prof. Milton Whitney, Chief of the Division of Soils in the United States Department of Agriculture, exhibited and described an instrument of his own invention for the determination of moisture and temperature of the soil, and it also gives information in regard to the amount of alkali in the soil, and even in regard to its structure. Prof. Whitney will shortly issue a bulletin fully explaining the construction and operation of the instrument. It consists of an electrical battery, by means of which a current is directed to a cell buried in the soil. The resistance that the current encounters depends upon the amount of moisture in the soil, and by passing the current through an apparatus which measures the resistance the moisture of the soil is accurately indicated. It is a most ingenious invention, and nevertheless so simple that any one can operate it.

Several papers were presented on the subject of testing farm machinery, and on the application of the dynamometer to determine the draft of vehicles and implements.

Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, read a paper on "The Effect of the Tuberculin Test Upon the Dairy." Director Voorhees, of New Jersey, discussed the question, "Shall Milk be Sold on the Basis of Quality?" and Prof. Georgeson discussed the problem of "How to Accomplish the Sale of Milk in the Retail Trade on the Basis of Quality." Director Jordan, of Geneva, discussed methods of making feeding experiments, and Prof. Houston, of Indiana, read a paper on method of giving instruction in agricultural chemistry. Several other papers of much interest were read in this section.

In the section on horticulture and botany, Prof. Mason, of Kansas, presented the subject of teaching industrial horticulture in agricultural colleges, and some half dozen leading botanists and horticulturists from as many States likewise read papers.

### Seeding Prairie Pasture.

EDITOR KANSAS FARMER:—Will say to Wm. Jenkins that I am reseeding some of my land by sowing the seed of oat grass, not wild oats, but the seeds of a grass that is coming in our pastures, of its own accord. It is sixteen to twenty-four inches high. Then I sow seed of what I call "Bastrand blue-stem." This grass is three to five feet high. The seed of this grass is abundant and easily gathered. Each of these grasses makes excellent hay. How so many people do without a farm journal is more than I can figure out. I am sure I get many times the cost of the FARMER from its columns each year.

J. J. JOHNSON.  
Success, Kas.

### Management of Manure.—Stands Up for Kansas.

EDITOR KANSAS FARMER.—An Eastern man has recently written to me, asking how manure is handled here and what effect it has. In reply I gave him my own plan of work and the manner the manure behaved on soil such as mine. As most all of my neighbors do as I do, my own plan answers for them all.

My barn-yard is on slightly sloping land, to the south of the buildings and to the north of a twelve-acre plowed field. The middle of the barn-yard is scooped out and the dirt thrown around the sides. The soil is sixteen to twenty inches of alluvial mold, of a chocolate color, underlaid with water-tight yellow clay, called, locally, "yellow gumbo." The drain of the door-yard, sheep-yard, also hog-yards, all run into the barn-yard, and the drippings from the corn-crib, stable, hay barn and sheep sheds also drain into the barn-yard, and for every inch of rainfall there are practically four inches that pass through the barn-yard. A shallow drain prevents the barn-yard becoming more than one-third full of water, and the center of the barn-yard is kept full of old hay, refuse from the feed-rack, etc. Thus the yard always presents a dry surface for the stock, while a large amount of moisture is present in the decomposing matter, preventing any loss by heating.

Whenever the barn-yard overflows (the liquid is red and very rich), the waste water passes off onto the plowed ground, that is kept subsoiled, and the liquid manure has never yet got across this land, and this land has usually been my garden spot.

A direct contrast to this plan is to select a well-drained spot for a barn-yard, and, just below the yard, dam up the creek and use this foul water for the stock to drink. One can see hundreds of such yard in a day's drive across the country.

Manure is usually hauled out in March, and as a rule is applied to clover sod intended for potatoes. The effects of the manure show plainly for several years, as the clay subsoil prevents waste by leaching down, and there is no escape for the manure except through the growing of vegetation. What a wonderful contrast to my Eastern home in Maine and Massachusetts, where the effect was only seen for one crop, as the gravel subsoil allowed all the fertility to leach away down below the reach of the plants.

Is there any wonder we read of "abandoned Eastern farms?" Why, where I was raised, in "Yankeeedom," the grass could only be cut with the "Armstrong mower" (scythe), and the swath was always one way, on account of the steep hills. The side-hill plow was used, and every year the stones had to be picked off and hauled away on the drag (stone-boat). To be sure, we had some choice springs and brooks, wild cherries, strawberries and box-berries, also lots of nice stone wall, but what a life as compared with the modern prairie farm. Allen county is the highest spot of land in eastern Kansas, has an average rainfall of thirty-seven inches annually, which is divided as follows: January, 1.52; February, 2.16; March, 2.46; April, 3.65; May, 5.33; June, 4.77; July, 3.84; August, 3.64; September, 3.69; October, 2.57; November, 1.88, and December, 1.51 inches. How could nature divide up the rainfall more to our advantage? Just enough for fall plowing and to start wheat; comparatively dry winter, with plenty of rain for plant growth in the spring and early summer, with an annual dry spell in July and August, in order to allow us to secure our abundant hay crop, which is often done without even a dew. As our ground will hold water, by subsoiling (thanks to Mr. Perine) we can retain plenty of moisture to carry all crops through July and August with the less than one inch weekly of rainfall. Is it any wonder all Eastern eyes are turned on Kansas? Great is Kansas, the center State of the Union and around which all others must, in time, revolve. We are proud of our State and our State paper, the "Old Reliable" KANSAS FARMER.

CLARENCE J. NORTON.  
Morantown, Kas.

## "Saved My Life"

### A VETERAN'S STORY.

"Several years ago, while in Fort Snelling, Minn., I caught a severe cold, attended with a terrible cough, that allowed me no rest day or night. The doctors after exhausting their remedies, pronounced my case hopeless, saying they could do no more for me. At this time a bottle of



### AYER'S

Cherry Pectoral was sent to me by a friend who urged me to take it, which I did, and soon after I was greatly relieved, and in a short time was completely cured. I have never had much of a cough since that time, and I firmly believe Ayer's Cherry Pectoral saved my life."—W. H. WARD, 8 Quimby Av., Lowell, Mass.

### AYER'S

### Cherry Pectoral

Highest Awards at World's Fair.

AYER'S PILLS cure indigestion and headache

### Grasses for Oklahoma.

EDITOR KANSAS FARMER:—I wish I could answer the questions of Wm. Jenkins, of Enid, Okla. Perhaps with him—at least with millions of others—we have been studying recently of Solomon's wisdom, answering all of the Queen of Sheba's questions, and we realize we know but little. I have just added a shelf full of "Encyclopædia Britannica" and "Encyclopædia Dictionnaires" to my library, but books do not answer these questions. Book farming alone will not answer them. But I am a believer in book farming as well as practical farming, and between the two I believe Friend Jenkins' questions will eventually be answered. Books, or what to-day largely stands for books, the farm journals, will tell us of the grasses of the world, and experimental farmers will give us practical tests.

I have only seven years' experience in sections where the so-called tame grasses do not succeed well, and even this seven years has been divided in two locations, and grasses were not the important question. Bread and butter held first place.

I was in central Kansas two years, and I thought they had made the mistake of plowing too much of their land. I had visited that section eight years before and found, on comparison with that time, the pastures would support more stock. The buffalo and gramma grasses were coming in thickly among the bunch and blue-stem, and I found that at least on ground that had only been cultivated a year or two it was going back to natural grasses again. Coming here I thought I would not make the mistake of plowing too much, and did not plow so much as they did, but I am thinking now it was too much.

But in my location I am not needing the tame grasses at present, nor will I for many years, I think. In our lowlands we have a grass that starts to grow in February—in fact, is green and growing nearly the year around. On the uplands it is thickly matted with buffalo and the two gramma grasses, so we have as good pasture as in the famous blue grass section of our old Iowa home. To get the necessary grain—wheat, Kaffir and corn—we have had about all the rough feed we need, some years more. Then, sorghum is a sure hay and millet reasonably so.

But is there any prospect of tame grasses? As I said, I have not as yet needed more grasses, so, having so many things to experiment with, I have not tried them much. On one of our farm yards, second year from gramma grass sod, Bermuda

grass seed was sown. There was a fair stand, but the next spring only a few patches were found. These made a thick sod, spreading over four or five feet square. The natural grass has, after three years, about taken possession again and the Bermuda scarcely holds its own against them, and is not any better grass, from appearance. Of course this is not a trial that would settle much, but it is the only one I know. I have intended sowing more but have found too much other work. I sowed a trial plat of alfalfa on red clay valley land, and on mulatto soil on a bench two feet above this. It is about ten feet down to water, but it is hard soil all the way, part of it red shale. The alfalfa grew about ten inches high at each of two cuttings first year and the same for three cuttings this year. Both years very dry, much more so than the three previous years. That on the red clay is best. I have only noticed two other plats in the county. One of these, on sandy upland, has not done as well as mine.

My first attempts with red, Japan, sweet, sand and crimson clovers were failures, also that with *Bromus Inermis* and *Pennisetum*.

I hear good reports of Johnson grass from the county east of us, as a pasture grass, but I can give nothing definite. I suppose most people know that in some places Johnson grass (*sorghum halapense*), is considered a nuisance and its further sowing prohibited by law, and its introduction into Oklahoma severely denounced by some, but with the different conditions prevailing here it may prove a desirable grass instead of a pest.

With roots and seeds of many desirable pasture grasses about us everywhere, it would seem our plowed lands, if need be, might be returned to the grasses or eventually those of some other dry country be introduced and established.

J. M. RICE.

Winview, Okla.

#### Wild Grasses Again.

EDITOR KANSAS FARMER:—In the KANSAS FARMER of November 19, I notice a letter by Wm. Jenkins, entitled, "How Grow Wild Grasses?" I consider Mr. Jenkins mistaken in his ideas of the practical work of the experiment stations, but will not discuss that matter here further than to say that undoubtedly they are doing eminently practical work. Because it is scientific it is all the more valuable. The farmer who is not more or less a scientist will fail and had better get into some other business. However, I believe our station bulletins should be written in good Anglo-Saxon as far as possible, so they may be intelligible to every farmer, whether or not he has studied classified science.

It may be of interest to your correspondent to know that the Wyoming station took up the study of grasses with its organization, and has been attempting to reach some practical conclusions on the grass problem in the arid region. We have been working with both tame and native grasses, with and without irrigation. Our work has not progressed far enough to enable us to give conclusive results with native grasses, but I may indicate what we believe the buffalo grass, gramma and blue-stem, about which the inquiry was made, will do.

We know that buffalo grass on overstocked ranges is being eaten up or tramped out and is fast disappearing. It is too small for anything but a pasture grass, and therefore has received less attention than varieties which will produce hay. Its disappearing is probably due to its palatability to stock and their relish for it causes it to be eaten off so close to the roots that it cannot produce seed. The larger number of our native grasses must be allowed to reseed themselves every few years or they thin out and succumb. When not overstocked buffalo grass produces seed and holds its own with other species. It does especially well where judiciously irrigated. Upon one of our experiment farms the seed have caught naturally in plowed ground and produced thrifty growth. Buffalo grass will succeed in its native soil and climate and respond to sowing in pastures or on plowed ground if stock is kept

away from it till it is well established. Gramma grass is longer than buffalo but never produces heavy crops of hay. No doubt a ton of it is more valuable than a larger amount of other hay, but upon unirrigated land (in Wyoming, at least,) it will rarely produce a ton to the acre, and more often from one-fourth to one-half ton. Sowing the seed or setting the sod in old plowed ground will bring it back. Unless pastured so closely that it can produce no seed it will perpetuate itself.

In speaking of blue-stem it will be necessary to throw in some botanical names, as several different grasses are called blue-stem. The ones generally called blue-stem here are the wheat grasses—*Agropyron glaucum* and *Agropyron violaceum*. These respond readily to cultivation, and with successive favorable seasons a good sod can be formed on old plowed ground in two or three years. At Laramie plowed land has become thickly sodded in three and four years without artificially planting the seed or irrigating, where only a few head of stock have had access to such pasture. Thoroughly harrowing the sod benefits both blue-stem and gramma grass, greatly increasing the yield. Blue-stem hay is nutritious and valuable, but generally the yield is too small to compete with tame grasses where the latter can be grown. Farmers should be able to obtain the seed of these native grasses by taking care of the crop on their best grass land.

In the United States Department of Agriculture there has been established a Division of Agrostology, which is co-operating with the experiment stations by sending out seeds of many grasses, including those varieties which are native in various parts of the country. In a few years we can reasonably expect to obtain results of great value to farmers in all parts of the country.

In that part of Wyoming which has an annual rainfall of over fifteen inches, the awnless brome grass has been very successful. It produces good crops and merits further trial throughout the West. Perennial rye grass has also withstood drought well and the thick mats of leaves furnish green pasture long after other grasses have dried up. They can be obtained from any reliable seedman.

Irrigated land in the arid region produces no hay crop comparable with alfalfa, though for pastures it has the objectionable features belonging to the clovers, and mixtures of tame or native grasses are more satisfactory for pastures.

Our greatest difficulty in grass culture is to obtain a stand. Our droughts destroy the seeds in germinating or the young plants soon after they come up, unless there is sufficient moisture in the soil to insure their obtaining a good foothold. I have found the press drill the best way to plant any seeds which can be made to feed through it. It insures quick germination and the plants get the benefit of the greatest possible amount of moisture.

B. C. BUFFUM.

Wyoming Experiment Station, Laramie, Wyo.

#### Page Fence.—Advertise.

EDITOR KANSAS FARMER:—In a recent issue of the FARMER I saw an inquiry from some one about how to stretch woven wire fences. If the inquirer would use the Page coil spring fence, advertised in the FARMER, he would never have any trouble like that, as it never gets loose and sags down. I have it in use as a corral for calves and also to fence a hog pasture, and it is as near perfect as any fence I ever saw.

It seems to me that there are Kansas farmers who have apples, honey and such things to sell that could make money by letting it be known through the advertising columns of the FARMER.

W. V. JACKSON.

Coldwater, Kas.

RHEUMATISM is a Fox which gives no quarter. It torments its victims day and night. Hood's Sarsaparilla purifies the blood and cures the aches and pains of rheumatism.

Hood's PILLS are the best family cathartic and liver medicine. Gentle, reliable, sure.

## The Stock Interest.

### THOROUGHbred STOCK SALES.

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

FEBRUARY 2, 1897.—B. R. Adamson, J. M. Tarley and G. Hornaday & Co., Poland-China brood sows, Fort Scott, Kas.

#### Swine Plague Remedies.

The decimation of many herds by disease continually directs attention to the subject of remedies. On this the *Swine Breeders' Journal* reviews the conditions under which benefit has been had from giving medicine:

"Hogs are now, and have been for some weeks past, dying from disease. Last year breeders had a similar experience, but from it, it is evident, but little was derived that would benefit the handler of hogs. Throughout the country hundreds of remedies have been used, which in a few cases have proved beneficial, but the majority have failed. Our observations of the action of remedies during this season has been that in herds where the treatment was commenced at the first indications of the disease, and combined with the remedy the best sanitary means for protection were employed, also the most careful nursing, such as protecting by means of houses carefully ventilated yet warm, the death rate has been very light. Where the hogs were permitted to look after themselves, medicine being administered only, the loss has been very heavy. In all things there is a right and wrong way of doing it. The housing of sick stock that only includes a little shed eight by ten, no window, no ventilation, no dry floor, no means of purifying the air, is more detrimental to proper recovery than the open woods lot. Such a pen in wet weather is damp and cold, and in warm weather the same until it has thoroughly dried out, which generally takes from two to three days and longer. During this time the sick animal is receiving no assistance against disease other than that represented in the medicine, which amounts to but little. To overcome disease nature must be supported so that it can throw off the disease. To place the animal in a position or condition that necessitates an effort to combat the serious effect of bad surroundings without, as well as the disease within, is simply taking from it the slight chance it has to exist when attacked by this swine plague. For years past breeders have consoled themselves that this disease becomes epidemic but once every seven to ten years, and the loss of their herds during those periods only could be overcome in subsequent healthy periods. The experience of the past three years would certainly indicate that the idea of a periodical appearance of disease is not supportable. It seems now that we have this disease with us at all times, all years. The only protection from it, then, is to be prepared to combat it all times. To do this, sanitary regulations must be enforced all the time, pens must be built on healthful principles only, and when disease appears the sick must be nursed and protected as you would your horse or cow that is sick. The throwing of a physic with a little soft feed to the hogs running to fresh water in the woods lot will not cure hog cholera. Of that we have abundant proof the past season. That the farmer and feeder will always have disease in their herds there is not the least doubt. But the progressive breeder can, if he will make the effort, protect his herd, and in a large majority of cases be ready to furnish the material for the farmer to re-establish his feeding operations."

#### How Change Color of Holsteins?

EDITOR KANSAS FARMER:—I come to you and your readers for some advice. I have been breeding the Holstein breed of cattle for the last twelve years. Now I find the steers hard to sell and wish to change to some other breed. Which would be the best breed to change to to get rid of the color and still retain some of the good milking quality? Should be glad to hear from some one who has experience. Should be pleased to hear of the Switzer, near

# More

Medical value in a bottle of Hood's Sarsaparilla than in any other preparation.

More skill, more care, more expense in manufacture. It costs proprietor and dealer but it costs the consumer less, as he gets more doses for his money.

More curative power is secured by its peculiar combination, proportion and process: wonderful cures effected, more testimonials, more sales and more increase. Many more reasons why you should take

## Hood's Sarsaparilla

The One True Blood Purifier. All druggists. \$1.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

Topeka, who had an article in the FARMER last spring, or last spring a year ago, on Holstein cattle. I would like to write to him, but have lost his address. JACOB RUFFI.

Urbana, Kas.

#### How to Make a Sheep Fence.

EDITOR KANSAS FARMER:—I notice in your last week's issue of the FARMER an inquiry by Wm. Jones, of Emporia, Kas., regarding the building of a fence to hold sheep, and the construction of a "Jumbo" windmill. Having had no experience with the latter, I will not undertake to make any suggestions, but will give my plan of the cheapest fence for sheep. I have tried many kinds, from the old worm rail fence to a nine-wire and a two-board fence, supposed by the builder to be dog and wolf-proof, to his later disappointment.

For our corrals we use sixty-inch woven wire.

To build a cheap fence, or the cheapest fence that will successfully restrain sheep, is the question with Mr. Jones. Sheep are not difficult to fence in, providing they have not been taught to creep through or climb over the fence. When once they become breachy they are troublesome to restrain, because where one goes they will all go. We have found, however, that when sheep have not been spoiled, that a five-wire fence—barb wire—is quite sufficient if properly constructed. Sheep are much more disposed to creep through than to try to jump over, and as their wool is a protection from the barbs on the wire, they do not have much fear of barbed wire injuries. I think a sheep, unless very breachy, will not undertake to jump a wire thirty-six inches high, nor will they jump to climb through, and by bearing these traits in mind we can determine the cheapest fence. We built a five-wire fence last spring, but got the lower wire too high from the ground and the second wire too far from the first, and we were compelled to lower the bottom wire and put on the sixth wire or remodel the whole fence. We would now put the first wire six inches from the ground, second wire twelve inches, third wire eighteen inches, fourth twenty-seven inches and fifth and top wire thirty-eight inches from the ground. The posts should be ten and not more than sixteen feet apart, stretching wires as tight as the strength of the wire will permit, putting the top wire on first and working from top down, instead of from bottom up, as most fence-builders do. Of course, everybody who has had any experience in building wire fence knows that the corner and end posts must be absolutely firm and practically unyielding to the tension of the wire. If wires become loose you have no fence for either sheep or hogs, and a very poor one for any purpose. H. M. K.

Connor, Kas.

As an emergency medicine, Ayer's Cherry Pectoral takes the lead of all other remedies. For the relief and cure of croup, whooping cough, sore throat and the dangerous pulmonary troubles to which the young are so liable it is invaluable, being prompt to act, sure to cure.

Every man should read the advertisement of Thos. Slater on page 15 of this paper.

## Irrigation.

### THE HIGH PLAINS OF WESTERN KANSAS.

One of our California friends, who has been traveling extensively throughout the arid regions, from Mexico to Canada, has had occasion to look into the question of farming on the high plains of Kansas. His statements, which are in detail, of the nature of a confidential report, cannot be given in full, but from them the following general statements have been taken:

Coming from the south and west he has traversed overland portions of Cheyenne, Sherman, Thomas, Logan, Scott and adjacent counties, to note during the late summer the condition of agriculture. In his trip he crossed nearly at right angles the depressions or draws leading down to the headwaters of the Republican and Smoky Hill rivers. He states that he found the bottom lands of the streams to be in the aggregate considerably larger than might be anticipated from the general description of the plains, but the farmers now remaining in the country are nearly all on the upland, persistently holding on and doggedly planting wheat.

At Russell Springs there was found to be opportunity for extensive irrigation from both storage and ground water supply, but only one man was seen who appreciated his opportunities. At Winona and Goodland and similar places on the plains there appeared to be no opportunity for development. The attempt to build towns on these high plains should be most vigorously condemned. The present system of rectangular land surveys as applied to this country is especially vicious and is responsible for a large share of the misery seen on all sides and testified by the long succession of sod house ruins.

The future apparently promises nothing for the upland farmer, and if some unforeseen relief is not soon presented every trace of settlement will and should be swept away. These plains afford excellent grazing and are sufficiently dissected by drainage to afford bottom lands. On these latter the water is close beneath the surface, apparently sufficient for a population such as can make full use of the uplands for pasturage.

This solution of the problem of the utilization of the Great Plains is the one generally conceded by the remaining farmers of the region, but at the little towns there are still left a few of the former agents or attorneys of defunct loan companies interested in keeping up the pretense of farming on the uplands. Their vociferous protestations fail, however, to completely drown the voice of experience.

If the plains, the greatest natural grazing land of the country, can be protected from the spasmodic and unprofitable plowing, and also from the incursions of the town-building schemers, the country can become one of the most prosperous of stock-raising communities. It is being demonstrated, however, that there must be a considerable change from the old method of handling cattle. It is necessary to keep constant care of the stock, and not only shelter the herds but feed when necessary. For this purpose alfalfa and other forage crops can be grown on the bottom lands and some wild hay put up in good season. The present checker-board system of subdivision is now the greatest obstacle to such proper use of the land and must in some way be done away with, allowing each settler to lay out his ranch and range with reference to the water and permitting him to travel directly from one bottom land settlement to another. The question how to most economically bring water upon the strips of bottom land is sufficiently complex for the best efforts of any group of men without being complicated by other matters.

The energies of the farmer should be devoted to guarding the grass crop. Few men from the arid region realize the superior value of this. One of the most striking objects is the toughness of the prairie sod, especially to a person who has regarded grazing land as

covered with tufts of scanty vegetation. Large slabs of this cut out are held together firmly by the interlacing roots. This means considerable feed to the acre and far less travel each day on the part of grazing stock.

In general, the people on the high plains know and think little of irrigation. In the towns, especially, they are the remnants of the boom population. They state that if they cannot farm these superb grazing lands they prefer to abandon the country forever. Success can only be attained through bringing in a radically different population, as few of those now on the ground have the patience or persistence necessary to adapt themselves to the natural conditions. It is only by bringing in the more intelligent men from eastern Kansas that anything can be accomplished.

The hopelessness of irrigation on the plains is perhaps best shown by the elaborate and costly experiment at Goodland. Here an enormous wooden Halliday windmill, twenty-five feet in diameter, has been erected. Water is raised by this 140 feet and poured into a reservoir of considerable size. Feeble attempts at farming have been made with the water from this. The water was found in a coarse material and had a relatively free delivery to the well, but the experiment has not been conducted in such a way as to demonstrate the quantity available and results are very discouraging.

A far better test of the amount of water available has been made by the steam pumping plant of the city and that at the railroad works one-half mile from the city pumps.

### Irrigation in Illinois.

About two years ago, at the Eastern Hospital for Insane, at Kankakee, Ill., an irrigation plant was put in, and the increased production of the farm the following year more than repaid the outlay. Dr. Clark Gapin, the Superintendent in charge, said to a representative of the *Irrigation Age*:

"I can see no reason why farmers should sit idly by and see their crops ruined by droughts. In this climate I should say that two irrigations during the season would be necessary, though, of course, this would depend on the amount of rain. I call my system 'supplemental irrigation,' as it is intended to supplement the rainfall. I don't know, however, but 'supplemental rain' would express the situation better, for the irrigation is sure and the rain is not. Almost any farmer, who possesses a well or spring, can, for a small cost, comparatively, insure his crops against a dry season. I estimate the entire cost of a plant—engine, mains, hydrants, etc.—to be about \$15 to \$20 per acre irrigated. This is the first year's expenditure. After that the expense would be only for fuel and labor. I believe the increase in crops the first season would more than repay the entire cost of the plant. It would be possible, in some cases, to use windmills for pumping, but small steam or oil engines are not expensive. In the case of the asylum, we have a pumping capacity of about 6,000,000 gallons of water per day for the institution, so we did not find it necessary to put in additional engines. The annual maintenance of an irrigation plant similarly situated to ours, including the coal used to run the engine, and an engineer for the same, would not cost more than \$1 per acre."

The Superintendent believes that the interest awakened in Illinois in regard to this question, on account of the severe droughts during the past few years, and the success met with on the asylum farm, where irrigation is demonstrated to be a great success, will lead to an immediate great advance in this line of work, and that within a few years every farmer will have an irrigation system, or will irrigate his orchards and gardens from wells. In many places a few farmers can join together and take water out of a stream, as was formerly done in Utah and other sections of the arid region.

The Superintendent predicts such a demand for cheap pumping plants, able to deliver water at a relatively small cost, that it will lead some inventive genius to make a pump at far less cost

than anything on the market at the present time. He would not advise any farmer, however, to wait for cheaper machinery, as the value of one crop lost for the want of irrigation will more than pay the cost of pumps and windmills at the prices they are now sold.

### Gossip About Stock.

Adam Rankin, of Olathe, Kas., reports numerous sales, recently, of some of his fine poultry to parties in Valley Falls, Osage City and other points. All of the purchasers are subscribers to *KANSAS FARMER*.

P. C. Bowen & Son, proprietors of East Side Poultry farm, near Cherryvale, Kas., have engaged the expert poultry judge, Mr. Theo. Hewes, to score their birds. They make a specialty of R. C. B. Leghorns, Barred Plymouth Rocks and White Wyandottes.

Attention is called to the great combination sale of Berkshire swine, to be held at Sedalia, Mo., on December 9 (Menefee's stable, East Main street). The offerings will be from the herds of N. H. Gentry, Harris & McMahan, June E. King, W. N. Brisky and James Houk. All these names are well known to swine breeders all over the West, and it will be a sale well worth attending.

Sunny Slope farm, Emporia, Kas., is one of the largest and best breeding establishments in the United States. They now have fifty head of pure-bred Hereford bulls ready for immediate sale. Any stockman or breeder needing a first-class male can be suited by visiting or ordering from this herd, where breeding and individuality are always skillfully combined in an up-to-date manner in all animals offered for sale.

Dietrich & Spaulding, of Richmond, Kas., report that the popular Poland-Chinas they are raising are still going. They have shipped one to S. S. Spangler, Ness City, one to H. C. Wey, Kirwin, Kas., and one to C. F. Whitney, Salina, Kas. This latter pig, by Breckenridge and out of Gentry's Choice, will make a yearling that will be hard to beat in the show ring. This season he took second in class and was not in show condition. They have a few left that are extra good.

The public sale of Poland-China swine, held last week, by Geo. Channon, Hope, Kas., was well attended, both locally and by outside breeders. Eighty-five head sold for \$1,085, an average of \$12.76. The top price of the sale was \$45 for Hadley Chip 15029 by Hadley Jr. 1834, out of Martha Washington 9th 29804 by Longfellow. This choice boar was bred by Sunny Slope farm and went to J. H. Taylor's Prospect Park herd, Rhinehart, Dickinson county, Kansas. He also got a fine gilt out of Princess Eulalie 2d 26748.

Notwithstanding the short time for preparation for the public sale of Berkshire and Poland-China hogs, last week, by O. P. Updegraff, of Topeka, the active Secretary of the Kansas Swine Breeders' Association, he had a fair attendance, locally, as well as a number of breeders from a distance, and the sale was only stopped because of darkness coming on, so that all animals catalogued were not sold. However, sixty-three head spring boars and gilts sold, making an average of \$16.30. The top price of the sale was \$42.50 for a gilt.

R. S. Cook, Wichita, Kas., says: "Tell the boys that the Champion herd is in tip-top shape. I have a few extra nice Banner Boy and World Beater boars to spare yet. Never had boars do better than this year, having made a splendid growth. Gilts, yes gilts that can't be beaten for nice, short heads, broad between eyes, short limbs, broad, straight backs, wide, deep hams, part of which are out of Gem's sisters and sired by that great show hog, World Beater. They are simply a grand lot of forty gilts—not a poor one in the whole lot."

Following the Channon sale, at Hope, November 24, came the Poland-China sale of H. H. Hague & Son, at Walton, Kas., that hustling firm, that never stops to eat or sleep when work is to be done. The day was rainy and the crowd small. Fifty-four hogs were sold at an average of about \$11. As a great part of the offering was spring pigs, it was considered a very successful sale. Every hog on the farm was sold except one brood sow and the herd boars. The firm now expect to lay the foundation for one of the most fashionably-bred herds in the State.

Attention is directed this week to the dispersion sale of Chester White and Poland-China swine, at Wamego, Kas., next week, December 8, by C. J. Huggins and E. T. Frowe. This announcement will appear this week only and is the only public sale of Chester White swine held in Kansas this year. The offering is a closing-out deal by one of the oldest breeders in the West and comprises forty head of improved Chesters, including eight boars ready for service, seven tried brood sows and a number of last spring and fall gilts. A number of the sows and gilts will be bred to the famous sires, Ben Buster Jr. 7431, he by Ben



It is a sad fate for a woman to feel that she is being hurried onward toward despair, bound hand and foot, unable to lift a finger in her own behalf. Many women know that the tortures of weakness and disease which they suffer must lead to inevitable breakdown, perhaps even to insanity and suicide; yet they seem powerless to obtain relief.

The doctor may half-understand the case or he may not understand it at all; ten to one he cannot help it. The regulation stereotyped methods of treatment so detestable to modest women are as a rule absolutely useless. It is not safe to trust to the advice or medicine of an uneducated nurse or any incompetent, unscientific person. But what can a woman do?

If any woman who finds herself asking this despairing question, will write stating her case carefully to Dr. R. V. Pierce, of Buffalo, N. Y., who is a skilled, educated expert in this special class of diseases, he will send her free of charge sound professional advice by which her trouble may be speedily relieved and if curable permanently cured. Thousands of women whom doctors could not help, have been completely cured by Dr. Pierce's Favorite Prescription, the most marvelously successful specific for "female complaints" ever invented.

The most interesting and valuable book for women ever written is Dr. Pierce's Common Sense Medical Adviser. A splendid thousand-page volume, with over three hundred engravings and colored plates. A copy of the present edition will be sent absolutely free to anyone sending twenty-one cents in one-cent stamps to pay the cost of mailing only, to Dr. R. V. Pierce, Buffalo, N. Y. The volume is bound in strong



paper covers. If a French cloth embossed binding is desired, send ten cents extra, thirty-one cents in all, to pay the cost of this more handsome and durable binding.

Buster 6189 out of White Lady 9168, also to Free Coinage 7839, he by Free Silver out of the sow Daisy, bred by W. S. Attebury, of Rossville. The stock is well bred and of good quality and includes some show pigs that will grace any pure-bred herd. Remember the date—Tuesday, December 8, 1896, at Wamego, Kas. Notify Mr. C. J. Huggins when you will arrive, so he can meet and entertain you.

Ward A. Bailey, owner of the Royal herd of Poland-Chinas, Wichita, Kas., writes: "I have a choice lot of stock on hand to dispose of at satisfactory prices. Fifteen males, including three one-year-old this fall, sired by Cunningham's Choice, Pride of Kansas and Royal King; twelve head of gilts, and will let a few of my aged sows go. Will sell sows bred if desired. I have a good lot of Barred Plymouth Rocks for this season's trade. I am going to have a good display at our poultry show this winter, at Wichita, December 8 to 13. Would be glad to have parties desiring either pigs or chicks to see my herd before placing their orders."

THE POLAND-CHINA SALE, DECEMBER 21. —Our readers interested in pedigreed Poland-China swine will find, on reference to the sale announcement elsewhere in this issue, that a draft of forty-five head have been selected out of the Rose Creek farm herd, consisting of spring boars and bred gilts, that will be offered to the highest bidder, at the farm, on Monday, December 21, 1896. The herd was founded early in 1895 by the best females obtainable from herds in four States—Nebraska, Iowa, Missouri and Illinois—and in the selection of the premier herd boar, Kodack 15086, an extra good individual, the result was very satisfactory. The visitor finds everything first-class—farm, improvements and the stock, both Poland-Chinas and Jersey cattle. The pigs are grown out right and are sure to please all prospective buyers.

THE SHORT-HORN SALE NEXT WEEK. —One of the best bred lots of Short-horn cattle offered during this year in the West will be the draft of fifty head—thirty bulls and twenty heifers—from the Idlewild herd of Mr. Harned. The bulls are all old enough for active service and half a score of them fit to head the most select of high-class herds. The females are a nice, deep-fleshed, smooth lot, and all the offerings are bred right and grown out so that in the change of ownership complete and entire satisfaction is assured. Space forbids that extended notice the offerings individually merit, but one very strong feature of the sale will be the great amount of straight-bred Cruickshank blood and the Scotch-topped on the best of American and English Short-horn families. In case the reader desires high-grade bulls he will find 150 head from which to make selections at the close of the pure-bred sale. Keep in mind the date—Thursday, December 10, 1896.

## The Family Doctor.

Conducted by HENRY W. ROBY, M.D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

### Anæsthesia and Surgery.

[On October 16, last, occurred the fiftieth anniversary of the discovery of anæsthesia. The physicians and dentists all over the country held jubilee meetings to celebrate that semi-centennial. At the Topeka jubilee Dr. Henry W. Roby gave the following address on the relation of anæsthesia to surgery:]

Emerson says: "We are all impressionable, but some more than others. This explains the curious contemporaneity of inventions and discoveries. The truth is in the air, and the most impressionable brain announces it first, but all will announce it a few minutes later."

And so it was with the discovery of anæsthesia. An untold number of men were dreaming the same dreams as Morton and Wells, and Jackson and Simpson—the same dreams that Sir Humphrey Davy had dreamed in his day and told in his laboratory. But when, like a flash of lightning, the illumination came, Morton, by a subtle affinity with nature, stood with his face toward the shekinah, and to him was first revealed the new gospel that pain had met its master and acknowledged his kingship. Like the sun and stars, that discovery at once belted the earth, and men in all quarters of the globe hastened to acquaint themselves with the new messenger of peace.

Up to that hour men prayed for death when accident overtook them. Strong men wept like helpless children at the sight of their loved ones in the grasp of pain's inquisitors. The mother prayed for her child, and then often went mad when her prayer was not answered. Few men could be found who dared to be surgeons. Their mission was too cruel and appalling for endurance.

And ropes and pulleys and the combined strength of strong men, dislocated joints were dragged back into position, amid the most frightful screams and lamentations and shrieks and groans of patient and friends. Under the deadening and dangerous stupefaction of opium and alcohol, men, women and children were lashed to benches, and strong men held their quivering, quivering limbs, when an amputation had to be made, and the scene was as horrifying as a bloody massacre by merciless savages. And yet, great-hearted men heroically did all that science could suggest or direct, in the vain hope of mitigating the awful suffering of their fellow mortals. But what a glorious day was that Friday, fifty years ago this Friday! When the usual hour came for the morning operations in that old Massachusetts general hospital, led by the ever glorious dreamer, Morton. King Somnus walked into that crowded operating room and set up his kingdom on earth, wide as the rolling seas, and deep and round as the planet. As Morton and the new monarch came in, there stood the lion-hearted Warren, with knife in hand, ready to remove the great tumor that disfigured the face and endangered the life of the patient. Six other doctors and a great amphitheatre full of anxious students were there to see if the impossible could be done; for they deemed it an impossibility then that all pain should be annihilated during an operation and the patient survive. Morton came late. He had worked until 2 o'clock the night before on his inhaler, and with the dawn was up and off to the instrument-makers again to have it finished. The work dragged, and doctors and spectators became impatient and incredulous, and at last Dr. Warren lost his stock of patience and said: "As Dr. Morton is not present it may be as well to let the operation go on in the usual way." But at that fateful moment Morton walked in with his inhaler and gave the ether. In a few minutes he said to Warren: "Your patient is ready, Doctor." And amid the most profound silence that ever pervaded that old operating room, Dr. Warren swept the knife around the base of the tumor. But there was no scream, no groans, no pleading for mercy, no prayers for death—all was silent as the grave. The swift knife completed its work amid profound silence, and the eager eyes of men who gazed on that wonderful scene filled with tears of gladness and gratitude. The hot blood leaped from the wound, but the patient lay still and smiling like a sleeping child in its mother's arms. And from that hour of triumph the science of surgery grew to be the greatest and grandest of all sciences. It has been victorious on more fields of contest than all the warriors whose feet have pressed the planet. Did you ever attempt to estimate the world's debt to surgery? Did it ever occur to you that every war is a campaign against life and limb? That every battle is a slaughter, and a grim and two-sided one at that? It is an appalling fact that the world still lauds and magnifies the man who leads an army to contest, whether he be victor or van-

quished. And the greater the slaughter, the greater the glory to the victor. What a vast array of names come trooping through the gateway of memory as the mind runs back over the pathway of history, of men whose only claim to remembrance is that they led so many men in battle, and that of their enemies, so many were left dead on the field, and so many more were wounded. But by the side of every great commander, and by the side of every subordinate commander, rides the minister of physical salvation—the surgeon. In camp and field and hospital, in battle-ship and fortress, he is indispensable, so much so that long years ago Homer sang: "The great physician, skilled our wounds to heal."

Is more than armies to the public weal." In the great war of the rebellion there were 111,285 men reported killed in battle and 507,911 wounded, on both sides, so that the surgeon had more than four times as many men on his hands at the close of the battle as the burial squads had. These 507,911 wounded were to be saved, if possible, for the commander to lead again to carnage, so that on the surgeon rested a tremendous responsibility. There is no way to estimate how frightful and appalling the mortality would have been if there had been no surgeons in any of the armies. There is a fair probability that more men in peril of their lives were saved by the surgeons than were destroyed by battle and disease. There is no possible way of determining just how many wounded men would have died without the aid of surgery. But many of them must have done so, and many, very many of those who were saved were saved through the blessing of anæsthesia and would have died from shock without it. There is no way of determining in time of peace how many among our seventy odd millions are daily injured and require surgical aid. But the list would be very large if we could make the tabulation, for about 4 per cent. of all the deaths in the country are from accidents.

When we take into account the fact that upwards of 43,000 people die annually in the United States from accidents, and that probably twenty injured people recover where one dies, we may estimate that a million people in the year have need for the surgeon for accidents alone, and a large number of those need anæsthesia during some part of the treatment. Then we must note the great army of people, whom no man can number, who require surgical operations for the removal of false growths and the correction of deformities.

As the discovery of Columbus very materially widened the tillable acres of the world, so this discovery of Morton has more than doubled the surgical fields of operation, and has made many operations simple and feasible that before were impossible. In a very recent article, the ink of which is yet scarcely dry, Mr. Henry Sablin, Superintendent of the Des Moines schools, in discussing the relation of the doctor to the school, says: "The skillful surgeon will take a living subject all to pieces, joint by joint; he will disembowel him, cleanse the cavities with some antiseptic preparation, and put each organ back into its proper position. He will split a man's skull in twain and wedge it apart permanently in order that his brain may have a chance to expand and grow. The dentist will extract the patient's teeth, fill them, and insert them again in their cavities; the oculist will take out the patient's eyes, turn them inside out, and put them back in their sockets." This statement, though somewhat poetic and fanciful, is in substance true, and the facts are made possible only by anæsthesia. Thus is added a very large sum to the nation's debt to surgery and anæsthesia. But it cannot be told in dollars nor in lives. It is inestimable, but grandly magnificent, for this country alone. Let us include the world and see if we can estimate humanity's debt to Morton and his co-discoverers. The United States contains about one twenty-second part of the world's population. Multiply our record by twenty-two and you will have the approximate record of the race. Take the world's war record, and then add to that all the riots and mobs, all the strikes with bloody encounters, all the accidents by explosions and collisions, by burning cities and plains and forests, all the injuries by floods and tornadoes, by wild beasts, and the countless agencies that cripple men in daily life in mills and factories, in streets, in fields and highways, all requiring surgical aid, and many requiring the great boon of anæsthesia!

Then we begin to see what this wonderful discovery of Morton means to mankind. It means more than the discoveries of Copernicus, Galileo and Columbus. They added new maps of planet and sky; he added a universal blessing to mankind.

Kalamazoo, Mich., is famous for celery—also as the home of Thos. Slater, whose advertisement appears on page 15.

Send \$1.35 to KANSAS FARMER office for one year's subscription to KANSAS FARMER and Chicago Weekly Inter-Ocean.

### Publishers' Paragraphs.

The next term of the Farrian Business University and Shorthand School will open on Monday, December 7. Corner of Seventh and Kansas avenue, Topeka, Kas.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

Mr. J. H. Plummer, publisher of Woman's World and Jenness Miller Monthly, offers \$150 in prizes to the persons making the largest number of words from the word "Industrious." See his advertisement in another column.

PERFECT SATISFACTION IN ALL RESPECTS.—We have had a KANSAS FARMER Sewing Machine since the 28th of December, 1894, and yet can find no fault with it in any way. It has given perfect satisfaction in all respects.—J. A. Lynn, Neosho Falls, Kas.

H. R. Eagle & Co., of 68 and 70 Wabash Ave., Chicago, Ill., advertise in this issue some fine bargains in ladies' and gentlemen's mackintoshes. Notice their announcement and send for their mammoth catalogue, which they will furnish to any one who will drop them a card and refer to KANSAS FARMER.

"My Experiences With Indians," by the Hon. Carl Schurz. The charm of Mr. Schurz's writings is well known, and it is again conspicuous in an article recently written for the Youth's Companion, which describes his visits as Secretary of the Interior to the Indian reservations, where he met such famous chiefs as Ouray, Spotted Tail and White Thunder.

Next year is sure to be a suitable time for extending orchards and ornamenting door yards; so says A. H. Griesa, of Lawrence, Kas. Mr. Griesa has grown old in the nursery business and has been very successful. All who are in need of reliable nursery stock will do well to write for his catalogue of all kinds of fruits, shrubbery, ornamental trees and flowers.

FRUIT-GROWERS.—Carnahan's Tree Wash and Insect Destroyer, manufactured solely by John Wiswell, of Columbus, Kas., is now being endorsed by many leading fruit-growers throughout the country. J. H. Logan & Son, of Nevada, Mo., proprietors of the Gem City fruit farm, used twelve cans of this wash on seven-year-old apple trees. They have recently finished gathering the apples from these trees and had 2,250 bushels of fancy packing apples, besides 800 bushels of second grade. No other such number of trees produced anything like such a quantity of fine fruit in that locality this year. Mr. Logan says all who expect to succeed in raising fruit should give this wash a thorough trial. Many other fruit-growers declare their intention to use the wash regularly in their orchards.

### Did You Ever See an Indian?

Expect not, so send a 2-cent stamp to the General Passenger Agent Colorado Midland Railroad, Denver, and he will send you a fine colored picture of one.

### Home-Seekers' Excursions.

Very low rates will be made by the Missouri, Kansas & Texas railway, on November 8 and 17, December 1 and 15, to the South. For particulars apply to the nearest local agent, or address G. A. McNutt, D. P. A., 1044 Union avenue, Kansas City, Mo.

### Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

### No Room for Doubt.

When the facts are before you, you must be convinced. The facts are that the UNION PACIFIC is leading all competitors, is the acknowledged dining car route, and great through car line of the West. The line via Denver and Kansas City to Chicago in connection with the Chicago & Alton railroad, with its excellent equipment of Free Reclining Chair Cars, Pullman Palace Sleepers and Pullman Dining Cars, demands the attention of every traveler to the East. Ask your nearest agent for tickets via this route. E. L. LOMAX, 49 Gen. Pass. and Ticket Agent.

### A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-engraved views of varied scenery in south Missouri. From these views an accurate knowledge can be obtained as to the productions and general topography of that highly-favored section that is now attracting the attention of home-seekers and investors the country over.

The title of the book is "Snap Shots in South Missouri." It will be mailed upon receipt of postage, 4 cents. Address J. E. LOCKWOOD, Kansas City, Mo.



is much better than going for the doctor, and is quite as effective and costs less money. You need always at hand a safe, sure remedy like . . . . .

Warner's Safe Cure

which will bring instant relief from sudden illness and work out a permanent cure.

A POSITIVE CURE FOR BRIGHT'S DISEASE URINARY TROUBLES FEMALE COMPLAINTS GENERAL DEBILITY AND MALARIA.

Cures also, all those diseases arising from disordered kidneys or liver. Large sized bottle or new style smaller bottle at your nearest store. Try it and know the satisfaction of such a remedy.

### Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for home-seekers.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

SALESMEN to sell Cigars to dealers: \$25 weekly and expenses; experience unnecessary. Reply with 2c. stamp. National Consolidated Co. Chicago

### Commercial Collections a Specialty.

H. C. ROOT, Attorney at Law, 104 Sixth Ave. East, Topeka, Kas. Practices in all State and federal courts.

## BIG SPECIAL OFFER

### TO FARMER SUBSCRIBERS

The Kansas Farmer For 1897—Price Alone, \$1.00.

The Peterson Magazine For 1897—Price Alone, \$1.00.

Both for the Year \$1.60!

To separate addresses if desired.

## Every Farmer an Irrigator!

The Atchison, Topeka & Santa Fe Ry.

Is offering for sale on easy terms and at reasonable prices

### 100,000 ACRES

Choice farming and grazing lands in the fertile Arkansas River Valley in South-Central and Southwest Kansas.

These are not cuttings, but valuable original selections which have reverted to the company. No better lands can be found for general farming and grazing purposes or investment.

Every farmer in Western Kansas either is irrigating or is going to irrigate. Practically all of our lands are susceptible of irrigation by the use of individual irrigation plants, such as are coming into general use in Southwestern Kansas. The portions that cannot be advantageously irrigated are fine grazing lands.

A combination of crop-growing and stock-raising is the most profitable method of successful farming, for which these lands afford unsurpassed advantages.

For free pamphlets, address JNO. E. FROST, Land Commissioner the A., T. & S. F. Railway, Topeka, Kas.

THOMPSON'S



GRASS SEEDER

Sows all kinds of Clover, Timothy, Alfalfa, Red Top, Flax and all Grass Seeds, any quantity, evenly, accurately, 20 to 40 acres a day. In wet, dry or windy weather. Weight 40 lbs. HOPPER FOR DAYS, WHKEY. Catalog O. E. THOMPSON & SONS FREE, 35 River Street, YPSILANTI, MICH. TRUMBULL 5120 20, Can. Ave. CANADA CITY, MO.



## The Young Folks.

### "I'LL DO WHAT I CAN."

Who takes for his motto "I'll do what I can,"  
Shall better the world as he goes down life's  
hill.

The willing young heart makes the capable  
man,  
And who does what he can, oft can do what  
he will.

There's strength in the impulse to help  
things along.

And force undreamed of will come to the  
aid

Of one who, though weak, yet believes he is  
strong,  
And offers himself to the task unafraid.

"I'll do what I can," is a challenge to fate,  
And fate must succumb, when its put to  
the test;

A heart that is willing to labor and wait  
In its tussle with life ever comes out the  
best.

It puts the blue imps of depression to rout,  
And makes many difficult problems seem  
plain;

It mounts over obstacles, dissipates doubt,  
And unravels kinks in life's curious chain.

"I'll do what I can," keeps the progress ma-  
chine

In good working order as centuries roll,  
And civilization would perish, I ween,  
Were not those words written on many a  
soul.

They fell the great forests, they furrow the  
soil,

They seek new inventions to benefit man;  
They fear no exertion, make pastime of toil,  
Oh, great is earth's debt to "I'll do what I  
can."

—The Independent.

### BOYS' FIRE DEPARTMENT.

Brooklyn Youngsters Have Lots of Fun  
with a Toy Patrol Wagon.

Several Brooklyn boys have organized  
a fire department of their own. The  
ages of the little firemen range from 11  
to 15 years, Ernest Grant, the foreman  
and organizer of the company, being the  
oldest. They have a complete patrol  
outfit, consisting of two goats seven  
hands high in their bare hoofs, one regu-  
larly constructed patrol wagon of  
small size made to fit the goats, one fire-  
extinguisher improvised from a tin  
water-cooler and a half-inch rubber  
tube, one scaling ladder and all the ap-  
pliances found among the equipment of  
a modern patrol company's headquar-  
ters. The uniforms are blue overalls  
and blouses, with rubber boots, rubber  
coats, fatigue caps and gaudy red fire  
hats of regulation block.

The goats' names are Tom and Bill,  
and they have been trained by the boys



THE BOYS GOING TO A FIRE.

until there is not a horse in all the regu-  
lar department which responds more  
faithfully and quickly to the clang of  
the alarm gong than do Tom and Bill.  
With them the boys have made a "quick-  
hitch" record of ten seconds. No such  
sleek goats were ever seen on the rock-  
ribbed hills of Shantytown. Tom is a  
wiry-haired maltese and Bill boasts a  
brindled yellow complexion.

The boys live near the house of engine  
company No. 35, and all summer long  
each of the lads was prompt at roll call  
at eight o'clock every morning. Their  
names were duly registered at lunch  
time. All fire alarms and the time they  
were sounded were entered in the blot-  
ter with red ink. In fact, everything  
about the place was conducted just as  
it is in a regular patrol house. All day  
the goats stood in their stalls back of  
the lilliputian patrol wagon ready to  
dart out and place themselves under  
the drop harness at the sound of an  
alarm. All was bustle and excitement  
about the shed at such a moment. Fore-  
man Grant shouted his orders in a shrill  
voice as all were slipping on their boots,  
rubber coats and fire hats.

"Willie and Jackie, grab the axes!  
Davy and Jonas take the hooks!  
Charlie, grab the roof rope!" he would  
shout.

The goats came clattering out, and  
the fire brigade was off with a bang.

the gong on the front of the wagon  
clanging loudly. The company's mas-  
cot, a fox-terrier dog, ran, barking,  
ahead. Around the corner they would  
speed to the house of engine No. 35,  
often arriving there before the regular  
company had started out. They re-  
mained at the fire house ready to re-  
spond to any alarm that might come in  
while engine No. 35 was away.

Since school began the young fire-  
men have taken a vacation, but next  
summer they will organize again. The  
New York World prints an interesting  
picture of their fire patrol wagon mak-  
ing a run.

### DOG KILLS HIMSELF.

When Little Ernest Wilcox Died His Pet  
Was Found Drowned.

A touching story of a dog's fondness  
for his young master comes from St.  
Louis, and is vouched for by those who  
know the boy's parents. Little Ernest  
Wilcox and his pet St. Bernard were in-  
separable companions. They often went  
swimming together, for Rover, the  
pet, was not afraid of the water. A  
few weeks ago Ernest was stricken  
with typhoid fever, and, after lingering  
for many days under the most careful  
nursing, the bright little chap died.  
All the time that Ernest lay sick abed  
Rover was on guard outside the door  
of the boy's room. Nothing could in-  
duce the faithful canine to leave his  
post.

When finally the young master passed  
away, and weeping friends and relatives



ERNEST AND HIS DOG ROVER.

came and went, and everything about  
the house was strangely silent, Rover  
refused to eat even the tiniest morsel  
of meat, and scorned a plateful of juicy  
bones as if they had been that much  
sawdust.

Very late on the night of little Er-  
nest's death, there came the noise of a  
great whining from the room where  
the dead boy lay. Investigation  
showed Rover standing on his hind  
legs in front of the cold young body of  
his quiet master.

Two days later Rover was missing.  
Ernest's father, Mr. Wilcox, went in  
search of the faithful old canine, but  
returned home after a long and weary  
round of inquiry without news of the  
dog.

The next day two men were rowing  
on the Mississippi river in search of  
the odds and ends that float about on  
the surface of all busy streams and un-  
der the big Merchants' bridge that  
spans the tide at St. Louis they found  
the dead body of a dog. It was Rover.

Whether the dog had fallen into the  
river by accident, or whether he had  
deliberately committed suicide from  
sheer grief over the death of his little  
master, no one can ever tell. But the  
last explanation of Rover's death seems  
the most likely one, because, as you  
will remember, Rover was an excellent  
swimmer.

### A Swallow's Swift Flight.

An untamed swallow, which had its  
nest on a farm near Chetwynd, in  
Shropshire, was caught and taken in  
a cage to London, where it was released.  
It returned to its nest in 80 minutes,  
having accomplished a distance of 145  
miles, at the rate of nearly two miles  
a minute.

### Little Miss Flossie's Thimble.

She hunted in the closet,  
She hunted on the stair,  
She hunted 'round the doorstep,  
She hunted everywhere.

She hunted thro' the twilight,  
But, when the dark had come,  
She paused to wipe her tears away—  
And found it on her thumb!

—N. O. PIERCE.

### SHOOTING SEED POD.

When Placed in Water It Explodes with  
a Loud Crack.

It is a funny little brown pod about  
the shape of a cigar and only an inch  
long. But if it is dropped in a pail of  
water it will explode suddenly with a  
loud crack, and from the inside of it a  
shower of small seeds will shoot upward  
into the air.

This pod is the fruit of a semi-trop-  
ical plant of the genus justicia, and na-



SHOOTING SEED POD.

ture has given it the power of bursting  
so that it may scatter its seeds far and  
wide. Sometimes after it falls on the  
water it will lie for some minutes quite  
still and then burst with a sharp ex-  
plosion. This explosion occurs because  
the outer coat of the pod soaks easily  
and this causes the hard inner coat to  
bend and bend until it bursts. Nor is  
this all of the wonder about the  
pod. When the seeds strike the water a  
little mucilage flows out and enables  
them to stick to the first object they  
reach.

Nature is almost as kind to this plant  
as she is to the burdock. You know how  
the old cow will come home with her tail  
full of burrs? Well, that is one way  
that the burdock distributes its seeds.  
And sometimes the small boy helps, too,  
by carrying a handful of burrs around  
on his coat tails.—Chicago Record.

### DRIVES A MILK WAGON.

Fifteen-Year-Old Girl Who Is a Clever  
Business Woman.

Of all the girls in Westfield, N. J.,  
15-year-old Lizzie Willoughby is attract-  
ing the most attention now, says the  
New York Journal.

The Willoughbys are in good circum-  
stances. The father is in business, but  
the family's affairs are such that little  
Miss Lizzie is regularly distributing the  
milk of 13 cows and is building up a  
trade that is the envy of the 14 milk-  
men of Westfield.

Regularly every morning Lizzie is out  
of bed before five o'clock. Then she  
hops into a light spring wagon with an  
inclosed box top, having windows in  
front and on the sides. There are two  
slits in the frame on the forward win-  
dow through which the reins pass. The  
milk cans are in the forward compart-  
ment. There's a comfortable back seat  
with cushions and blankets so that Liz-  
zie drives on her milk route pretty  
much as if she were sheltered in a coupe.  
If a chill morning happens along she  
takes along a lantern for a foot warmer.

"Of course, I like the business," she  
says. "I wouldn't do it for a moment  
if I didn't. Father has plenty for us  
all, but I like to be doing something."

"I began this way: Several years ago  
I went out with father in the wagon

just for fun. Then I took an interest  
and began to do little things just to  
help, and before long I knew all there  
was to do. After that some mornings  
came along when father had very im-  
portant business to attend to, and I  
went out with the wagon and made de-  
liveries in his place. All this summer  
I've done the work.

"When I get up at about a quarter to  
five o'clock, mother has breakfast  
ready and the horse is in the wagon.  
I jump in and start. Everybody treats  
me real nice, except some who are jeal-  
ous of our big trade. They say things.

"I don't like to be talked about as  
if I was something dreadful or wonder-  
ful, and I don't like to be stared at, but  
it's so early when I drive around that  
few people are out to notice me. Then  
I always remember that work is nothing  
to be ashamed of.

"I finish my rounds about eight  
o'clock, then I change my clothes and  
go to the high school. I'll graduate this  
year. Then I'm going to study and be-  
come a teacher. I love dancing best of  
anything. Why, I've danced all night  
and gone home and got right into the  
milk wagon and driven out. Oh, but  
how I did sleep when I got home. Noth-  
ing could have waked me up—except  
another dance."

The ambitious little business woman  
whipped up her horse and drove off on  
her rounds collecting overdue milk  
bills.

We endorse all the proprietors say about  
the merits of Salvation Oil. It is the great-  
est cure on earth for pain. 25 cents.

## FARMERS

DO YOU WANT TO BETTER YOUR  
CONDITION? If you do, call on or ad-  
dress: The Pacific Northwest Immigra-  
tion Board, Portland, Oregon.

When you write mention Kansas Farmer.



ELY'S CREAM BALM is a positive cure.  
Apply into the nostrils. It is quickly absorbed. 50  
cents at Druggists or by mail; samples 10c. by mail.  
ELY BROTHERS, 56 Warren St., New York City

THE BEST Place for young people to go for  
a superior Business, Shorthand  
or Penmanship course is to the  
EMPORIA BUSINESS COLLEGE of  
Kansas. No out-of-date, text-  
book course in Book-keeping, but Business Prac-  
tice from start to finish. Nothing else like it.  
Graduates successful. Board \$1.00 per week. Write  
for particulars to C. E. D. PARKER, Pres't.,  
Emporia, Kansas.

## Washburn College,

TOPEKA, KANSAS.

Progressive Management,  
Thorough Courses of Study,  
Economical for Students.

Academic and Collegiate departments.  
Special teachers of Oratory, Music and Art.  
THE FALL TERM begins Wednesday, Sep-  
tember 18, 1896.

GEO. M. HERRICK, President.

## Topeka Business College

TOPEKA, KAN. BEST BUSINESS, SHORTHAND, PENMANSHIP COURSES.

Large School Good Positions. Elegant Catalogue Free. Address L. H. STRICKLER

## FARRIAN BUSINESS UNIVERSITY

628-630 KAN. AVE. TOPEKA, KANSAS.  
A PREPARATORY, BUSINESS AND PENMANSHIP INSTITUTE.

PREPARATORY COURSE.—Spelling, Reading, Elocution, Writing, Grammar, Defining, Arith-  
metic, Correspondence, Geography and Short Methods.

BUSINESS COURSE.—Double Entry Bookkeeping, Single Entry Bookkeeping, Business Law,  
Practical Arithmetic, Rapid Calculation, Civil Government, Practice for keeping books for the different  
trades and professions. Practical Grammar, Business Form, Practical Penmanship, Correspondence, Office  
Practice, Spelling and Defining, Banking.

PENMANSHIP COURSE.—Penmanship—Artistic,  
Business, Abbreviated, Plain, Running, Shade, Base, Card  
Writing, Backhand, Vertical Hand, Marking, Flourishing,  
and Theory of Penmanship.

DAY AND EVENING SCHOOL all the YEAR.  
We make a specialty of preparing persons for Civil Service Positions. Instruction thorough.  
Students can enter at any time. Positions secured for graduates. For further particulars address

JOHN W. FARR, Principal, 628-630 Kansas Ave., Topeka, Kansas.

# KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Thursday by the

KANSAS FARMER COMPANY.

OFFICE:

No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.

Address KANSAS FARMER CO., Topeka, Kansas.

## ADVERTISING RATES.

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

If our friends whose subscriptions will expire January 1 will bear in mind that the labors of our subscription department at that time may be lightened by early renewals, and take the first opportunity to send in their dollar bills, they will confer favors which will be greatly appreciated.

KANSAS FARMER and *Agricultural Epitome* to January 1, 1898, for \$1.25. Subscribe now.

The publisher of the *Kansas Sunflower*, the now famous "Becky Sharp's paper," has made arrangements with us whereby we can offer it and KANSAS FARMER one year for \$1.50, which is the price of the *Sunflower* alone. Send in your subscriptions to this office.

The *Youth's Companion* is one of the finest publications for young and also for older people. We can furnish KANSAS FARMER and *Youth's Companion* for \$2.35 for one year to new subscribers to *Youth's Companion*. Or we will renew subscriptions, with KANSAS FARMER subscriptions, at \$1.65, if sent direct to this office.

*Leslie's Illustrated Weekly* has always been and is now a \$4 paper, and worth the money if any illustrated paper is worth \$4 per year. But in order to accommodate our subscribers we have made arrangements with the publishing company whereby we are able to offer *Leslie's Weekly* and KANSAS FARMER both for one year for \$3.

This is the time of year to make up your list of periodicals for next year's reading. Every family should have at least one home county paper, one agricultural paper and one magazine. Many will add one State political paper and one of the great city papers. Others will want a more extended list. Whatever your wants, we can save you money on the purchase. We have wholesale rates on everything published and will give the advantage to every subscriber to KANSAS FARMER. Send in your list get our estimate.

The meteorological and family paper, *Word and Works*, edited by Rev. Irl R. Hicks, of St. Louis, contains the most elaborate forecasts of the weather anywhere published. It is a large and elegantly gotten up paper on a high moral standard and is entertaining for its general family reading. The weather forecasts of Rev. Hicks are uttered with the utmost confidence and are explicit and entertaining. In addition to the paper, Rev. Hicks publishes an almanac, in which he prints his predictions for the entire year, with such explanations as interest and instruct the reader. The price of Mr. Hicks' paper, *Word and Works*, is \$1 per year. By arrangements just made we are able to offer *Word and Works*, the Hicks almanac, which is a book of 108 pages, and KANSAS FARMER, all one year, for \$1.60. Send subscriptions to this office.

## THOSE EASTERN DETRACTIONS OF KANSAS.

There is some unnecessary anxiety in Kansas on account of the uncomplimentary sayings of some Eastern papers about the way the late election went in this State. It should be observed that these Eastern papers are treating their readers to a warmed-over dish of the compliments used by Kansas papers and speakers of their opponents in the late campaign. The joke of the matter is that these Eastern writers fail to remember that charges made during the excitement of a hot political campaign are to be taken in the "Pick-wickian sense" in Kansas, just the same as elsewhere. When one set of politicians in Kansas accused the other set of desiring to rob the farmer and give the plunder to some Eastern "plutocrat" and his Western hirelings; to skin the farmer and present his hide to the corporations, it must not be taken seriously. So, also, when one set of politicians accused the other set of desiring to rob some Eastern creditor, to repudiate his debts, to confiscate the railroads, and to do other and diverse unlawful acts and to have them sanctioned by the courts, these accusations are by no means to be taken seriously.

It might be inferred from the semi-hysterical state into which some Eastern papers have wrought themselves about the situation in Kansas, that there are never any elections in the States and communities in which their editors have been corralled, were it not remembered that during the late contest these same editors and the political pullers around them engaged in a contest which differed from that in Kansas only in the greater absurdity of the charges which each half of the community attempted to have believed of the other.

No serious attention need be given to the hysterical condition into which some of our Eastern political friends have been thrown because Kansas, during the late summer, in pursuance of the ordinary methods of politics, selected two men as candidates for each administrative office of the State, two candidates for Chief Justice, and two candidates for each seat to which the State is entitled in Congress, and two candidates for each seat in the Legislative bodies of the State, and later, namely, on the third day of November, by a majority vote chose their officers essentially from one set of these candidates and not from the other.

Go to, now, you men of the East. Do you not know that the State of Kansas is yet 200 miles broad and 400 miles long; that her soil is unimpaired in its richness; that we have just as much rain and sunshine as if the election had been indefinitely postponed? Know you not that our mines are as rich in coal, in salt, in oil, in gas, in lead, in zinc, as if a few more thousands had voted the ticket which lost? Our growing wheat crop is thriving. Our cattle, swine, horses, sheep and poultry are prospering. Our great corn crop is being diligently gathered into cribs. Our wheat in the bins is increasing in value. Our butter is rich and yellow, and we are increasing its output. Our schools, colleges and university; our churches and Sunday schools; our daily and weekly newspapers—all the interests we possess, with the single exception of the apparent esteem of a few Eastern writers, who are beside themselves, are prospering as well as if we had foregone the election franchise.

The citizens we have called to public service are and have for a long time been identified with the State. They are not without qualifications for the positions to which we have chosen them, and in making our choice we have taken the unbiased judgment of the voters of the State, and, moreover, we shall continue to conduct our elections in this way and in our selections to be guided solely by our freemen's choice, whether it suits outsiders or not.

The thirtieth annual meeting of the Kansas State Horticultural Society will be held at the State house, Topeka, next week, commencing Wednesday. Arrangements have been made for one and one-third fare on the rail-

roads, provided 100 or more persons come by rail and secure certificates at the time of purchasing tickets. Programs are sent free to those who apply to the Secretary. More than thirty varieties of apples from cold storage will be on exhibition. The program is a good one.

## WHITE AND YELLOW CORN.

One Southern paper quotes from another which quotes from a book some statements as to composition of corn. These would be most important if true. That no injustice may be done, we give the article in full:

"There has long been a difference of opinion in respect to the feeding value of white and yellow corn, but chemistry has come to our aid and shows us the difference, and numerous feeding tests have substantiated the chemist reports. The general membership book of the Ralston Health Club, of Washington, D. C., gives the following analysis:

	Carbonates.	Nitrates.	Phosphates.
Northern yellow.....	67.5	12.3	1.1
Southern white.....	39.2	34.6	4.1

"Here we learn that the Northern yellow corn has nearly double the amount of carbonates, which are the heat-producing and fattening properties of the grain; that the Southern white corn contains more of the nitrates, which makes it much the best feed in warm weather. The white corn has nearly three times more of the nitrates, which produce muscle and growth, making it much the strongest grain to feed to working teams and growing animals. The white is also more than three times as rich in phosphates, which supply nourishment to the nervous system, including the brain. The yellow being much the richest in carbonates, will make the most fat and heat.

"In the extreme northern portion of this country we find the yellow flint varieties grown, while in the far South are raised mostly large white kinds, and thus we understand what is meant by the yellow Northern and white Southern varieties.

"As food for the table, the authority just quoted says: 'We find the grain of Southern corn with a large portion of muscle food, plenty of oral food and less of heating food. It is the typical nourishment of the brain worker who believes in exercise, or of those who work with their muscles. Next to wheat it is the best food for humanity. Northern or yellow corn is the reverse of this, containing a large portion of heaters or carbonates, and overheating the blood, as buckwheat cakes do, causing pimples, sores and headaches.'

"Let us understand that by wheat is meant the whole grain or graham flour; the white flour is much more heating, and, like yellow corn and buckwheat, makes bad blood. In comparison with oats, white corn is found to be less heating and a better nerve food. Does not this account in part for the fact that Southern people, who eat more corn than Northerners do, are freer from blood and skin diseases? Let us appreciate what we have, and make use of it rather than purchase so much of our bread-stuff in the North."

Farmers long ago observed a preference for yellow corn on the part of that discriminating judge, the hog. But it was not pointed out by that judicial character that his choice was influenced by the demands of his system for the fat-making materials. Indeed, at the time of expressing a liking for yellow rather than white corn he has shown a most decided taste for so nitrogenous a food as milk. But possibly he has, in this last instance, allowed his sense of taste more influence than the results of his chemical analysis.

But the figures above given as representing the percentages of the great classes of foods, the carbonaceous and the nitrogenous, are so radically different from those universally accepted on the authority of the most eminent chemists, that their accuracy is open to suspicion. According to these authorities, the protein or nitrogenous substances in the kernels of corn amounts at the maximum to 15.3 per cent., while the average is 10.5 per cent. It is certain that further explanation and corroboration of the comparative statement of composition of yellow and white corn is needed before very great importance can be attached to it.

If a corn containing over 34 per cent. of proteids has been produced it is about time for dispensing with meats, and therefore with cattle and hog-raising.

Remember, you can get the KANSAS FARMER and the Topeka Semi-Weekly Capital, both one year for \$1.50, sent to this office.

## HOME-MADE INCUBATOR.

EDITOR KANSAS FARMER:—Will you please inform me, through the columns of your paper, where I may obtain the most exact description of how to make an incubator? F. B. FAY.

Wilson, Ellsworth Co., Kas.

A few years ago the KANSAS FARMER contained as good a description as can be written of how to make an incubator. If ever anybody undertook to make an incubator according to these directions, his success was not such as to dispose him to report it. If the writer were required to make a home-made sulky cultivator or a home-made incubator, in each case taking the responsibility of successful operation, he would have no hesitation in determining that the preference lay in the direction of the cultivator. There are many manufacturers of both cultivators and incubators. Maybe both are sold too high. But the man who has a little cash will probably find it possible to make it go a long way in purchasing either incubator or cultivator. If the home town dealer will not talk in the right tone about prices, invest a quarter in postal cards and write to manufacturers. At first they will talk about "list prices," etc. But give them to understand that it is not list prices that you want to hear about, but that you are prepared to take an interest in "the least, last and lowest cash on delivery price" for what you are writing about. Some manufacturers and some dealers will turn a deaf ear to your words; but some, whose advertisements may be found in the FARMER, will want your cash and will want to make it an inducement to deal with them. Our correspondent should secure an incubator in the construction of which have been worked out all the details necessary for successful operation at a little more than the cost of the materials necessary to make a home-made machine. The eggs likely to be spoiled in bringing the untried machine into proper adjustment will be worth more than the difference between the cost of the materials and the cost of a thoroughly-tested machine.

If, after considering these things, our correspondent still desires to try a home-made incubator, the KANSAS FARMER will try to furnish the necessary directions.

## KANSAS IMPROVED STOCK BREEDERS.

The next annual meeting of the Kansas Improved Stock Breeders' Association (which also includes the Kansas Swine Breeders' Association) and the first annual breeders' combination sale, will be held at Topeka, January 12 and 13, 1897. This will be the greatest occasion for fine stock breeders ever held in Kansas, and each member of the association is expected to do something for the good of the order. This may be the only warning given. Prepare yourself accordingly, so that when the Executive committee calls you will be properly equipped for action.

The Committee on Program and Arrangements will shortly issue the annual program, and meantime it is expected that each member will immediately send suggestions by return mail to the Secretary, so that this annual meeting shall by far surpass all previous ones.

The year 1897 should be a great year for breeders and the improved stock business generally, and this convention will probably start the ball rolling. Address, H. A. HEATH, Secretary, Topeka, Kas.

KANSAS FARMER and the *Advocate*, both one year, for \$1.50.

Remember, you can get KANSAS FARMER and *Breeder's Gazette* both for one year for \$2, saving \$1 by the combination.

KANSAS FARMER and Leavenworth Weekly Times both for one year for \$1.25. KANSAS FARMER and Leavenworth Daily Times both for one year for \$3. Send to this office.

Remember that \$1.85 sent to this office will pay for one year's subscription to the "old reliable" KANSAS FARMER and the *Cosmopolitan Magazine*, one of the brightest, best and most artistic magazines published.

## BEET SUGAR NOTES.

So much has been published recently in agricultural journals with reference to beet sugar that the following summary of facts may be found interesting:

At a convention of the Nebraska Beet Sugar Association, recently held in Grand Island, a day was devoted to the discussion of co-operative factories. The opinion of most of the delegates present was that co-operation is not practicable under the present condition of farmers financially.

A beet sugar factory with a capacity of 300 tons daily has been nearly completed at Menomonee Falls, Wis., and will begin working this year's crop of beets the latter part of December. Farmers receive \$4 per ton for beets testing 12 per cent. and \$5 per ton for those testing 20 per cent. Over 350 farmers have signed contracts to grow beets for ten years.

The new factory at Eddy, N. M., has begun operations and will run about four months. Analyses of beets there show from 15 to 20 per cent. sugar.

An experimental field at Barstow, N. M., gave twenty-five tons of beets to the acre.

Part of the machinery for the new factory at Alamitos, Cal., is in place. It will be completely equipped in time for the crop of 1897.

The sugar beet crop of 1897 in this country will be worked by eleven factories, nearly all of them built during the last few years. The factory at Alvarado, Cal., is the oldest, having been built in 1876; then came Watsonville, Cal., in 1889; Grand Island, Neb., in 1890; Chino, Cal., Norfolk, Neb., and Lehi, Utah, in 1891. This year factories have been built at Eddy, N. M., and Menomonee Falls, Wis., and those in course of construction are at Alamitos and Salinas, Cal., and Mt. Nero, Utah. It is also reported that J. D. Hill, the owner of the sorghum sugar factory at Fort Scott, Kas., will convert it into a beet sugar factory.

A French expert recently stated that he considered the irrigated country around Greeley, Colo., to be the best section of the United States for the growing of sugar beets.

One of the greatest difficulties the builders of new factories meet with is the fact that farmers do not like to risk the experiment of trying a new kind of crop, but nearly all the factories now in operation are offered contracts for more beets than they can handle.

It is with disappointment that we read the following statement in Henry Clews' circular of last Saturday: "It is not easy to form any definite opinion upon the course of our securities in the foreign markets during the next few weeks. The effects of the election abroad have certainly not been what was expected on this side of the Atlantic; for we have had to take \$20,000,000 of returned securities where we had anticipated sending out about that amount." Mr. Clews follows this statement of fact with a soliloquy in which he considers these \$20,000,000 a rather insignificant amount and not worth making a fuss about except as an index of foreign financial feeling. The amount is small as compared with the \$2,000,000,000 at which the estimates place the foreign holdings of American securities. If these \$2,000,000,000 draw an average of only 4 per cent. interest they absorb an aggregate of \$8,000,000 annually to pay the income upon them. Perhaps this country will be as well off if the process of returning these securities continues pretty active.

Many inquiries have been propounded as to the feeding value of Kaffir corn. The results of chemical analysis have shown it to be but little inferior to Indian corn. The value of Kaffir corn fodder has been well attested from experience. It has been left, however, for the farm department of Kansas Agricultural college to make close experimental tests in such a way as to compare Kaffir corn with maize or common corn. The stock with which the test was made was that excellent judge of feeding values—the pig. It turns out that the cost of adding each pound to the weight of pigs was: With Kaffir corn meal, 2.54 cents; with corn

meal, 1.98 cents, or it required 2.54 pounds of Kaffir corn meal to add as much weight as was added by 1.98 pounds of corn meal. The experiment included a test of admixture of soy bean meal which proved highly advantageous to the appetites and growth of the pigs, but at the estimated price, \$2 per 100 pounds, added considerably to the cost of gain. Elaborate excerpts from the bulletin will be made for next week's KANSAS FARMER.

The final bulletin of Kansas State Board of Agriculture for 1896 was issued December 1. It shows in detail by counties the yields of the more important crops. The bulletin reached this office so late that it is possible to present only a summary this week. The report will be given in full next week. The total yield of winter wheat is 27,155,365 bushels, or 11,641,124 bushels more than in 1895. The corn crop is 221,419,414 bushels, or 19,962,018 bushels more than last year. The oats crop is 19,314,772 bushels, against 31,664,748 bushels last year. The total acreage of winter wheat sown is 3 per cent. less than last year.

## Kansas Dairymen's Resolutions.

Following are the resolutions (except those of a merely local or personal nature) adopted by the Kansas State Dairy Association, at its recent annual meeting in Abilene, and which were not received in time for publication in our report of the proceedings:

*Resolved*, That we extend our unstinted thanks to Profs. Haecker, of Minnesota, and Curtis and McKay, of Iowa, for their very able and instructive lectures delivered before this association. Also to Secretary F. D. Coburn, of our State Board of Agriculture, for the compilation of his invaluable work, entitled "Cow Culture," and to J. H. Monrad for his inspiring and life-promoting labors among us.

*Resolved*, That we, as an association representing the greatest interests of the largest class of citizens of our State, demand of the Legislature of Kansas the passage of the bill introduced by the Chairman of our committee at the last session of our Legislature, with amendment suggested by this meeting, designated as Senate Bill No. 260, and entitled, "An act to prevent deception in the production and sale of milk and in the manufacture and sale of butter and cheese, imitations thereof and substitutes therefor; to prescribe penalties for violation thereof; to create a State Dairy Commissioner, and to define his powers and duties," or some similar bill that will protect the dairy interests of the State against all imitations and adulterations of dairy products.

*Resolved*, That we ask that a sufficient appropriation be made by the Legislature to establish and equip a successful dairy school in connection with the Agricultural college, at Manhattan. And be it further

*Resolved*, That, appreciating the high character and services of the Kansas State Board of Agriculture in its successful endeavor to promote the agricultural, dairy and kindred interests of this State, it is the sense of our association that its control and conduct should continue as originally intended and so long maintained—a non-partisan, non-political body, devoted to the higher education and advancement of Kansas producers. That we as individuals and as an association, will lend our influence to prevent its being in anywise converted into a political machine or a perquisite of any political party.

## Farmers' Institutes.

The following dates and appointments for farmers' institutes in this State, under the auspices of and to be attended by representatives from the Agricultural college, have so far been made:

Russell, Russell county—December 4 and 5; Prof. Georgeson.  
Oneida, Nemaha county—December 10 and 11; Profs. Hitchcock and Willard.  
Nortonville, Jefferson county—December 17 and 18; Prof. Olin and Mrs. Kedzie.  
Oak Grange, Shawnee county—December 17 and 18; Profs. Georgeson and Winch.  
Hackney, Cowley county—December 29 and 30; Profs. Fallyer and Mason.  
Hiawatha, Brown county—December 30; Dr. Mayo.  
Overbrook, Osage county—January 21 and 22; Profs. Mayo and White.  
Berryton, Shawnee county—February 11 and 12; Profs. Graham and Walters.  
Haven, Reno county—February 11 and 12; Profs. Popenoe and Lantz.

Do not let your dealer palm off on you any new remedy for colds. Insist on having Dr. Bull's Cough Syrup.

"Dairying for Profit, or the Poor Man's Cow," is practical, was written by a woman who knows what she is talking about, and is cheap—only 10 cents for a 25-cent book. To subscribers for the KANSAS FARMER. Send to this office:

## Santa Fe Road Establishes an Industrial Department.

The management of the Santa Fe Route, appreciating the vast importance of developing local business enterprises in the territory traversed by its lines, has created an industrial department, in charge of an experienced and competent Commissioner, whose sole concern it will be to assist in such development by acting as a means of communication between would-be investors seeking profitable employment of capital on the one hand and the innumerable opportunities for such investment in Western territory upon the other. The Third Vice President of the Santa Fe has accordingly addressed a communication on this subject to the General Freight Agents of the entire system, a copy of which communication we give below. The significance of this beneficent policy to communities richer in opportunity than in capital will at once be apparent, and it will doubtless meet with hearty co-operation everywhere:

CHICAGO, November 20, 1896.

Mr. F. C. Gay, G. F. A., Topeka, Kas.:  
Mr. L. J. Polk, G. F. A., Galveston, Tex.:  
Mr. E. Chambers, G. F. A., Los Angeles, Cal.:

GENTLEMEN:—In pursuance with the policy we have already talked about, of assisting in every way we consistently can in locating new enterprises and at the same time fostering industries already located on our line of road, we have established an Industrial Department.

Mr. Jas. A. Davis has been placed in charge of this department, with the title of Industrial Commissioner, with headquarters at Chicago.

This department will, so far as it seems compatible with propriety, take a paternal interest in the development of the towns and territory served by our company, and it will respond promptly to all calls for co-operation in the establishment of factories, location of mills and the development of and all resources that may be discovered.

It will endeavor, where necessary, to place produce in touch with markets, and in a general way it will undertake to bring about improved conditions all over our system.

It will not attempt to boom any one town as against another; in fact, it will not in any way favor booms, but will proceed on the theory that a solid, continuous growth is better than a boom, and its efforts will be in that direction.

It will not take any financial interest in proposed industries, as it will have no money to invest nor cash to contribute.

The Industrial Department will not assist in the location of creameries where there are no cows, nor rolling mills in a country without either iron ore, fuel or coke, nor in any way will it knowingly lend its support to a proposition that seems wrong, either geographically, commercially or financially.

Manufactories that consume native raw materials will be encouraged. For example, in the corn belt there does not appear to be any reason why hominy mills, glucose, sirup, sugar and starch factories, if properly managed, should not thrive.

These factories should all begin in a small way. The capital invested should not all be put into working plants. It takes money to operate a factory after it is built, and the primary essential is good management. Nothing succeeds with poor management.

I write you quite at length on this subject, because it seems very important to me that everybody along our line ought to know how we feel about this matter. We want to be in touch with the people we serve, and we want them to know that we appreciate that anything we do towards building up and enriching the towns and country we traverse builds up and enriches this company.

Mr. Davis will be glad, at any time, to hear from Boards of Trade, Commercial Clubs, Farmers' Alliances or any organized bodies, as well as firms and individuals, and will make it his business to visit and advise with any community wishing to establish manufacturing or in any way desiring to improve their condition.

Circular announcing Mr. Davis' ap-

pointment will be issued to-day, and I think it would be well for you to advise all your subordinate officers as to what we desire to accomplish, in order that we may get the greatest results from the Industrial Department.

PAUL MORTON,  
Third Vice President.

## A Wonderful Cure for Kidney Disease and Rheumatism.—A Free Gift.

The Kava-Kava shrub, as previously stated, is proving itself a wonderful curative for diseases of the kidneys or other maladies caused by uric acid in the blood. This new botanic discovery bids fair to change medical practice in these diseases, and its compound, Alkavis, is now regarded as a sure specific cure for these maladies. We have many letters on the subject from business men, doctors and ministers, of which the following from Rev. J. H. Watson, of Sunset, Tex., a minister of the gospel of thirty years' standing, is an example. He writes:

"I was suddenly stricken down on the 22d of June with an acute attack of kidney trouble (uric acid gravel). For two months I lay hovering on the border line of life, and with the constant care of two excellent physicians, I only received temporary relief. My family physician told me plainly the best I could hope for was a temporary respite. I might rally only to collapse suddenly or might linger some time. But the issue was made up, and as I had for years warned others to be ready, so now more than ever I must needs put my house in order and expect the end. Meantime I had heard of Alkavis and wrote to an army comrade (now principal of a college), who had tried it. He wrote me by all means to try it as it had made a new man of him. At the end of two months and then only able to sit up a little, I dismissed my physicians and began the use of Alkavis. In two weeks I could ride out in the carriage for a short time. The improvement has been \* \* \* constant and steady. I am now able to look after my business. I feel I owe what life and strength I have to Alkavis. \* \* \* I am fifty-five years old, have been a minister over thirty years, have thousands of acquaintances, and to every one of them who may be afflicted with any kind of kidney trouble, I would say, try Alkavis."

Another most remarkable case is that of Rev. Thomas Smith, of Cobden, Ill., who passed nearly one hundred gravel stones under two weeks' use of this great remedy, Alkavis.

So far the Church Kidney Cure Co., of No. 420 Fourth avenue, New York, are its only importers, and they are so anxious to prove its value that for the sake of introduction they will send a free treatment of Alkavis prepaid by mail to every reader of KANSAS FARMER who is a sufferer from any form of kidney or bladder disorder, Bright's disease, Rheumatism, dropsy, gravel, pain in back, female complaints, or other affliction due to improper action of the kidneys or urinary organs. We advise all sufferers to send their names and address to the company and receive the Alkavis free. To prove its wonderful curative powers it is sent to you entirely free.

## Important to Breeders.

Every one interested in improved stock should have the *Breeder's Gazette*, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one—both papers one year for only (\$2) two dollars; or we will supply the *National Stockman and Farmer*, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50. Send for sample copies to the papers direct, and save money and get a big benefit by sending your subscription to KANSAS FARMER, Topeka, Kas. No progressive farmer or breeder can afford at this low price to be without this great trio of farm magazines.

## Popular Low-Price California Excursions.

The Santa Fe Route personally conducted weekly excursions to California are deservedly popular. About one-third saved in price of railroad and sleeper tickets as compared with first-class passage. The improved Pullmans occupied by these parties are of 1896 pattern and afford every necessary convenience. A porter goes with each car and an experienced agent of the company is in charge.

The Santa Fe's California line is remarkably picturesque, and its middle course across the continent avoids the discomforts of extreme heat or cold.

Daily service, same as above, except as regards agent in charge. For descriptive literature and other information address G. T. Nicholson, G. P. A., A. T. & S. F. Ry., Chicago.

Young men or old should not fail to read Thos. Slater's advertisement on page 15.

## Horticulture.

### OBSERVATIONS ON THE CARE OF FRUIT TREES.

By Prof. L. H. Bailey, in Bulletin 102, Cornell University Experiment Station.

(Continued from last week.)

All remedial treatments are generally begun too late in the life of the orchard. It is probable that plants become fixed in their habits by living long in uniform conditions, and that this habit is not readily broken. At all events, every observing horticulturist knows that it is often a difficult matter to induce in plants a habit of life which is directly contrary to the accustomed one. Apple trees should bear well when they are ten years planted. If they have not established a bearing habit by the time they are twenty years old it may be a difficult matter to impress a new character upon them then. Whilst we advise the plowing up and pruning of all neglected and profitless orchards, we cannot hope that this treatment will always rescue the most confirmed cases of unproductiveness. By the time an apple orchard is eight or ten years old the owner should begin to see indications of its probable future behavior, and he should then begin his endeavors towards any change which he desires to bring about.

If an old or mature orchard still refuses to bear it is likely that some radical change in the method of treating it may be useful. Many orchards develop a habit of redundant wood-bearing, and these are often thrown into fruiting by some check to the trees, as severe pruning, girdling, and the like. Probably every orchardist has observed that the attacks of borers sometimes cause trees to bear. It is an old maxim that checking growth induces fruitfulness. This is the explanation of the fact that driving nails into plum and peach trees sometimes sets the trees to bearing, and also of the similar influence exerted by a label wire which has cut into the bark, or of a partial break in a branch. Girdling or ringing to set trees into bearing is an old and well-known practice. It is not to be advised as a general resort, but I should not hesitate to employ it upon one or two of the minor branches of an unprofitable tree for the purpose of determining if the tree needs a check. I saw a Baldwin tree this year in which two large limbs had been girdled last year, and these limbs were bending with fruit whilst the remaining branches and the adjacent trees were barren. Girdling may generally be done with safety in spring when the leaves are putting out. A ring of bark two or three inches wide may be removed clear to the wood, and entirely encircling the limb. I have heard of excellent results following the simple ringing of trees, which consists in severing the bark—but removing none of it—completely around the tree with a sharp knife, in spring. These are, of course, only incidental operations to be employed with caution and then only upon branches of less importance. Their value is wholly one of experiment, to aid the owner in determining what fundamental treatment the orchard probably needs.

Orchards are commonly grown on shares with other crops. There can be little objection to the growing of hoed crops in an orchard until the trees show signs of bearing, if the land is well tilled and the crops are liberally fed: but land cannot be expected to give good yields of fruit and of other crops at the same time. The worst of all crops for the orchard—and they are also the commonest ones—are hay and grain, because they allow of no tillage to conserve moisture and to alleviate the soil. It is well known that grass farming makes grass farmers; that is, continuous hay-raising sells off the fertility without replacing it and impoverishes the farm and eventually impoverishes the farmer. This is why our interior hill farms are now so much run down. What, then, shall we think of the farmer who expects to raise both hay and apples on the same land year after year?

If one wants to raise hay or grain it

is cheapest to grow it where there are no trees to bother. If he wants to grow apples or grapes, he had better choose some other place than a meadow or grain field.

Failures are often caused or aggravated by neglect of pruning. There is less frequent neglect in this direction in western New York than in the others which I have mentioned. Horticulturists have been well taught, by books, periodicals and nurserymen's catalogues, how to train and shape the plant, but there is very little good advice respecting the proper treatments of the orchard soil. Yet the apple orchard, which is the least productive of all our fruit plantations, is at the same time the very one which receives least attention in pruning. It is fair to assume that some of the failure is due to this inattention; and there is also sufficient direct experience to prove that careful and thorough pruning is essential to best results in fruit-raising.

Much of the unprofitableness of fruit plantations is due to the incursions of insects and fungi. This is the subject which has latterly received the major part of the attention of persons who engaged in studying the difficulties of fruit-growing, and it is not strange that there has arisen a general belief that these enemies are the one chief cause of the failures of orchards. I am convinced that the experimenters have not overstated the destructiveness of the insects and fungi, but there is danger that the silence upon other and more fundamental matters in orchard economy, may tend to magnify the enemies beyond their comparative importance. I should not emphasize spraying less, but should emphasize tillage and other good care more.

The literature of spraying is now voluminous, and the farmer should be able to instruct himself upon all matters of immediate practical importance, but whilst he is spraying he should also not forget to look for borers, and to clean up old rubbish piles and waste places about the plantation.

Profit and loss is often a question of varieties. Many orchards contain such an ill-assorted lot of varieties that even when the crop is good it is worth little. What varieties to plant is a local question. It can never be answered by experiment stations. It is one of those judgments which the farmer must make for himself and upon which very much of his success will depend.

The fruit-grower should know by the time his apple orchard is twelve or fifteen years old if his varieties are likely to be satisfactory. He can generally find it out before this time. A man who does not find it out until his orchard is twenty or more years old has neglected his opportunities. If one discovers an error in choice of varieties before his trees have reached full maturity—whether the trees are apple, pear, cherry, or plum—he should forthwith top-graft them. This top-grafting is sometimes profitable even in old trees, although it is usually unsatisfactory at that time.

In late years it has been observed that some varieties are commonly infertile with themselves; that is, the pollen of one variety is more or less impotent upon flowers of the same variety. The subject is little understood and it is not yet safe to generalize upon it; but it is a good practice to plant varieties in alternate rows or only two rows together, to insure free fertilization. Some of the varieties of apples and pears which have been studied in this respect (by Waite and Fairchild) are as follows:

#### APPLES.

*Varities more or less self-sterile.*—Bell-fleur, Chenango, Gravenstein, King, Spy, Norton Melon, Primate, Rambo, Red Astrachan, Roxbury Russet, Spitzenburgh, Talman Sweet.

*Varities generally self-sterile.*—Baldwin, Codlin, Greening.

#### PEARS.

*Varities more or less self-sterile.*—Angou, Bartlett, Bou-sock, Clairgeau, Clapp, Columbia, Easter, Gray Doyenne, Howell, Jones, Lawrence, Louise Bonne, Mount Vernon, Sheldon, Souvenir du Congrès, Superfin, Colonel Wilder, Winter Nellis.

*Varities mostly self-fertile.*—Angouleme, Bosc, Buffum, Dial, Flemish

Beauty, Kieffer, Le Conte, Manning Elizabeth, Seckel, Tyson, White Doyenne.

It is probable that many trees fail to bear because propagated from unproductive trees. We know no two trees in any orchard that are alike, either in the amount of fruit which they bear or in their vigor and habit of growth. Some are uniformly productive, and some are uniformly unproductive. We know, too, that scions or buds tend to reproduce the characters of the tree from which they were taken. A gardener would never think of taking cuttings from a rose bush or chrysanthemum or a carnation which does not bear flowers. Why should a fruit-grower take scions from a tree which he knows to be unprofitable?

The indiscriminate cutting of scions is too clumsy and inexact a practice for these days, when we are trying to introduce scientific methods into our farming. I am convinced that some trees cannot be made to bear by any amount of treatment. They are not the bearing kind.\* It is not every mare which will breed or every hen which will lay a hatful of eggs.

In my own practice, I am buying the best nursery-grown stock of apples (mostly Spy), and am top-grafting them with scions from trees which please me and which I know to have been productive during many years. Time will discover if the effort is worth the while, but unless all analogies fail the outcome must be to my profit.

\*This subject was presented by the writer to the American Association of Nurserymen at the meeting in Indianapolis last June.

(To be continued.)

#### State Horticultural Society.

EDITOR KANSAS FARMER:—This society will meet at the State capital, December 9 to 11, where its rooms are provided as a properly State society. It has been for years a private concern that elects its own members, does its own work, at first on its own account, but later received appropriations from the State to pay for its printing, then added \$500 yearly as salary for Secretary, increasing in a few years to over \$8,000 for its various uses and a less amount the past few (five to seven) years.

The time to make it a personal snap, aggrandizement or laudation to a few of its members has passed, and a new era of usefulness to the public may be expected, and should be worked for by every member and citizen of the State.

It should become authority on all horticulture in the State not merely an apology for it. It should avoid and reject all long-winded theories, or long, detailed reports. It should aim at results and how to get them. The society has issued a good program for the next meeting, and every part should be freely discussed. Among other things it provides for the revision of the constitution. An amendment was offered last year to cut out several sections that are obsolete, and are or never were creditable to the best interests of the society, or to the spirit that first suggested them.

The society should work harmoniously, honestly and intelligently and be above suspicion or entanglements. By all means read the constitution of this society, study its import and support the right.

A. H. G. Lawrence, Kas.

#### Liver a Protection Against Rabbits.

EDITOR KANSAS FARMER:—I have read, through your columns, of some asking how to preserve fruit trees from rabbits barking them. I have a twenty-acre orchard that has been bearing for several years. I rub my trees with either hog or beef liver in the fall. It is a sure preventive against rabbits.

Lewis, Kas.

JARED MALIN.

If you are anxious to find the most reliable blood purifier, read in Ayer's Almanac the testimonials of those who have been cured of such terrible diseases as catarrh, rheumatism and scrofula by the use of Ayer's Sarsaparilla. Then govern yourself accordingly.

Remember that you can get the KANSAS FARMER and the Kansas City Daily Star, both for one year, for \$4. or the KANSAS FARMER and the Kansas City Weekly Star both for one year, for \$1.20.

## WE CURE

Diseases of the Liver Kidneys and Bladder Thousands of People Testify to our Success in Curing them after all other means failed

**Dr. J. H. McLEAN'S LIVER and KIDNEY BALM**

IS THE PEERLESS REMEDY WE USE

All Dealers Sell It

PRICE, \$1.00 PER BOTTLE

THE DR. J. H. McLEAN MEDICINE CO. ST. LOUIS, MO.

#### KANSAS HOME NURSERY.

Up to date for reliable Fruit and Ornamental trees. Best varieties of Small Fruits in full assortment for all planters in the West. Catalogue free.

A. H. GRIESE, BOX J, LAWRENCE, KAS.

#### SMITH'S SMALL FRUITS FOR SPRING 1897

100 varieties old and new Strawberries, including Wm. Belt, Brandywine, Paris King, Bissel, Isabel, Barton, Marshall. New Raspberries—Egyp-tian, Miller, Bishop, Columbian. If you want plants I have two millions for sale.

B. F. SMITH, BOX 6, LAWRENCE, KAS.

#### Garnahan's Tree Wash and Insect Destroyer

Destroys the borer worm and apple root louse, protects the plum from the sting of the curculio and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John W. Weller, Sole Mfr., Columbus, Kas., and Cleveland, Ohio.

## CHOICE SEED POTATOES

**COBURN No. 1**—A new seedling of great vigor; pinkish; short but very bushy vines; white bloom; extra early; eyes shallow; very prolific. Indeed, good table potato and a good keeper. Price \$1.25 per bushel, or three bushels for \$3.

**EARLY KANSAS**—A large medium variety; russet straw color; medium vines; purple bloom; eyes rather deep, but a great yielder of very large potatoes, and an extra good table potato. Price \$1 per bushel, or three bushels for \$2.25.

**GARMAN No. 1**—Same as the Early Kansas, except it has white bloom and does not grow so large tubers. Price \$1 per bushel, or three bushels for \$2.25.

**KANSAS FARMER**—A new seedling of great vigor. A late variety, oval, flattened; eyes very shallow; straw color; very prolific; vines medium and spreading, completely covering the row; white bloom; very best of all keepers and a good eater. Surely worthy of its name and a grand potato. Price \$1.25 per bushel, or three bushels for \$3.

Three pecks of each of the above four kinds, \$2.50; packed in lined barrels and delivered at depot free. Write your name, postoffice, county and express office very plainly, and send money with order. I can furnish most all of the leading new kinds.

Address **CLARENCE J. NORTON, Morantown, Kansas.**

**LADIES** I Make Big Wages—At Home— and want all to have same opportunity. The work is very pleasant and will easily pay \$15 weekly. This is no deception. I want no money; but will gladly send full particulars to all sending no. 100, care of Mrs. E. B. Stebbins, Lawrence, Kas.

## In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm.  
Address all communications Topeka, Kas.

### Asked and Answered.

Kindly answer the following questions through the KANSAS FARMER: (1) Is there any special value in turnips as a food for milch cows, aside from furnishing a succulent food during the season when such foods are scarce? (2) Do turnips tend to increase the yield of milk, and is the percentage of fat affected by turnips fed? (3) Do turnips exert any injurious effects upon the milk, i. e., is there any peculiar flavor given to the milk or the butter from cows that have been fed turnips? I would like to see the most reliable answer you can furnish to the above questions.

J. C. CHRISTENSEN.

Mariadahl, Kas.

1. Turnips have the following composition: Water 90.5, digestible protein .6, carbohydrates 5.5, fat .2. It will be seen that they contain very little nutriment, only six pounds all told in 100 pounds of turnips. There is no doubt but that they have a beneficial influence on the health of cows, especially in winter when on dry feed.

2. It is not probable that turnips have any tendency to increase the milk flow, except as an aid to digestion, that enables the cow to eat and assimilate more food than she otherwise would. Turnips of themselves have very little feeding value, and only act indirectly on the milk secretion. The rutabaga variety contains more nutriment than the ordinary kind. Since the percentage of fat is but very little affected by the most potent feeds, it is but reasonable to expect that turnips would have no action whatever in that direction.

3. If fed in considerable quantity turnips are very apt to taint the milk, and producers of fancy milk and butter should be very careful to stop their use as soon as any odd taste is observed. By feeding the turnips immediately after milking, the next milking, twelve hours later, will be tainted but slightly or not at all. Beets and carrots make a somewhat better ration and there is no danger of taint. So large an amount of turnips would need to be given, in order to get any benefit when fed alone, as to render it dangerous to good milk. Turnips should be fed in combination with bran and corn meal. In these days of critical taste no food should be given to cows that will produce any off flavor in milk or butter. The surest test, however, is to give turnips a trial and note the result.

### Gathered From Many Sources.

From Report of Kansas State Board of Agriculture ("Cow Culture").

"In purchasing a new cow, regard not only her breed and lacteal characteristics, but the way she has been 'brought up.' The general appearance of the farm or dairy alone from which she was taken will often give you a pretty clear insight into the latter. Select your cows with care. Don't let a love for breed override your better judgment as to grave faults they may possess."

Creameries have often been a failure because started with too great a dead weight in the cost of the outfit, and before there was a guaranty of the patronage of a sufficient number of cows. In the past the building of these was boomed by the agents, who palmed off the outfits at their own figures. Creameries are all right, but they must be built economically from the ground up.

When I say feed to full capacity I do not mean all the grain or concentrated food the cow will eat if that causes her to eat too little coarse fodder. The cow is made to eat a large quantity of coarse and bulky food, and to do her best and keep in a healthy condition there should be a certain proportion between the concentrated food and the coarse food. This proportion, I think, should be about half as many pounds of the grain food as of the coarse food; that is, if a cow will eat ten pounds a

Established 1827.

Comes Every Week.

# THE YOUTH'S COMPANION

The Companion of the Whole Family.

The Prospectus of The Companion for 1897 offers many brilliant features which will give the paper great practical and educational value.

## Papers of Great Worth.

Besides a delightful supply of fascinating Stories, Adventures, Serial Stories, Humorous Travel and Sketches, Anecdotes, etc., each Volume of THE COMPANION furnishes an unusual number of Articles of exceptional value written by men and women at the very forefront of their professions. Below are named a few of the Articles already engaged for 1897.

THE HABIT OF THRIFT.  
THE COST OF BECOMING A DOCTOR.  
HOW TO TRAIN THE VOICE.  
NURSING AS A CAREER.  
CLEANING THE METROPOLIS.  
THE NEW YORK POLICE FORCE.  
THE REAL MIDSHIPMAN.  
THE QUEEN'S HOUSEHOLD.  
NEW CURES FOR OLD DISEASES.  
SCHOOL LIFE IN FRANCE.  
BIG AND LITTLE WORLDS.  
AMONG THE IMMIGRANTS.  
HOW LINCOLN EDUCATED HIMSELF.  
HOW I BECAME AN ARCTIC EXPLORER.  
MY EXPERIENCES WITH INDIANS.



MR. ANDREW CARNEGIE,  
ONE OF THE EMINENT CONTRIBUTORS FOR 1897.

Andrew Carnegie.  
Dr. Austin Flint.  
Madame Lillian Nordica.  
Dr. William L. Love.  
Col. George E. Waring, Jr.  
Hon. Theodore Roosevelt.  
W. Clark Russell.  
Lady Jeune.  
Dr. Cyrus Edson.  
Max O'Rell.  
Sir Robert S. Ball.  
Alvan F. Sanborn.  
Jesse W. Weik.  
Adm'l A. H. Markham, R.N.  
Hon. Carl Schurz.

## Other Popular Writers.

\*In addition to twenty-five staff writers, THE COMPANION Contributors for 1897 will include not only the most popular writers of fiction, but some of the most eminent Statesmen, Scientists, Travellers and Musicians.

Ian Maclaren.	Harold Frederic.	Hon. Thomas B. Reed.	The Marquis of Lorne.
Rudyard Kipling.	Hamlin Garland.	Hon. Hilary A. Herbert.	Lady Vernon Harcourt.
Hall Caine.	George W. Smalley.	Hon. William L. Wilson.	Miss Alice Longfellow.
Stephen Crane.	Hayden Carruth.	Hon. Judson Harmon.	Mrs. Burton Harrison.
Frank R. Stockton.	John H. Upshur, U. S. N.	Hon. Henry Cabot Lodge.	Edward Everett Hale.
Chas. Dudley Warner.	Lieut. R. E. Peary, U. S. N.	Hon. Carroll D. Wright.	Rev. Lyman Abbott, D. D.

And more than one hundred other eminent men and women.

More than Forty of the most popular Artists of the day will prepare illustrations in keeping with the excellence of the Articles contributed.

700 Large Pages in Each Volume — 52 Weeks for \$1.75 — Send for Illustrated Prospectus.



New Subscribers who will cut out this slip and send it at once with name and address and \$1.75 will receive:  
FREE—The Youth's Companion every week till January 1, 1897;  
FREE—Thanksgiving, Christmas and New Year's Double Numbers;  
FREE—The Companion's 4-page Folding Calendar for 1897, Lithographed in Twelve Beautiful Colors. The most artistic and expensive color production The Companion has ever offered;  
And The Companion Fifty-two weeks, a full year, to Jan. 1, 1898.



THE YOUTH'S COMPANION, 201 Columbus Ave., Boston, Mass.

day of grain and twenty pounds of fodder, that will be all right; if she will eat fifteen pounds of grain and at the same time take thirty pounds of fodder, there will be no danger of over-feeding; but if, by increasing the grain from ten pounds a day to fifteen pounds, she drops off on eating fodder down to ten or fifteen pounds a day, then there is danger. In calculating these proportions, if ensilage is fed, it should be divided by three to reduce it to dry fodder.—C. P. Goodrich.

"Pasturing cows on green, fresh, rank rye will impart a peculiar flavor to the milk and butter, very much the same as fresh grass pasture does in the early spring, only with the rye the flavor is apt to be much more intense than with the grass—so strong, in fact, as to be quite disagreeable to most persons. Rye pasture is one of the best to induce a large flow of milk, and the way I have done is to feed the cows, when they are put in the stable night and morning to be milked, what nice, early-cut clover hay they will eat; they are also given a feed of grain. In this

way the peculiar grassy flavor is reduced or toned down, so that instead of being disagreeable it is usually liked. If by doing in this way the peculiar flavor is still too strong, I would let the cows run on the rye pasture only a part of each day."

Sell the poor cows and begin breeding and filling up the vacancy with better ones. Choose the best and breed them to a sire from a butter-making family. Breed a dairy cow according to the law of dairy breeding. The man who runs a steamboat does it by the law of steamboating, not of railroading; if he did not he would get stuck in the mud. When you have secured a good cow, get her to eat all she can. The more you coax her to

eat the better, as profit comes alone from foods. Don't starve the calf; you can't afford to let it stop growing a minute; neither teach it to make fat; if you do, when she is 4 years old and you will ask her for milk, she will say: "No, sir; you taught me to give you tallow, not milk; you made me fat and large in front and fitted me out with a beefy form, and now I am a fine type of that sort of animal. No, sir; do not ask me for milk—I have not got it to give you, but I can give you tallow, if that will do." Do not discard the heifer when she is 2 years old and has her first calf if she does not come up to your expectations; try her another year; then, if she refuses, turn her over to the bologna sausage mill. It is a long journey from the scrub to the paying herd, but it can be accomplished if we will.—Prof. I. P. Roberts.

**Rose Registered Jersey Cattle and Poland-China Swine**  
are unrivaled. J. V. E. are rich in the blood of Coomassie and Stoke Pogis. Service bull, Calvin S. Price 37850, a grandson of Pedro and Marjoram 2d—won first premium New Jersey State fair, 1894, when a grand old bull. Herd boars fashionably bred and high-class individuals. Head herd boar Rose Price, Medium 18453 by Woodburn Medium, he by Happy Medium; dam Fantasy by One Price. Assisted by Tecumseh the Great by Chief Tecumseh 2d; dam Moss Wilkes by Geo. Wilkes. Second assistant Domino 18734 by What's Wanted Jr.; dam Bonnie Z. by Gold Coin, he by Short Stop. Domino won first, pig under 6 months. Nebraska State fair, 1896. Our S. I. E. H. W. V. N. are high scorers. We have the best equipped dairy farm and most complete breeding establishment in northern Kansas. Farm in Republic county, near Nebraska State line. Take U. P. or Rock Island railroad to Belleville, or write.  
JOHN P. TOLFOED, Manager, Chester, Neb.

## The Apiary.

Conducted by A. H. Duff, Larned, Kas., to whom inquiries relating to this department should be addressed.

### CANDY FOR FEEDING BEES.

A number of readers of the KANSAS FARMER have written lately in regard to making candy for feeding bees, how to use it, etc. The time for supplying bees with liquids, those that lack stores for winter, is almost past, and, indeed, is past, except a very fine spell of weather presents itself, which is not likely, and as a result candy feeding is the only remedy, except we have a supply of sealed frames of comb honey.

The manner of making this candy is as follows: Take granulated sugar, in whatever quantities you wish to use. Add about one-fifth of the amount in bulk of water. We want to add just water enough to start it to melting well. In using too much water it requires much longer in boiling, as the surplus water must be boiled out, and much time is saved by using as little water as possible; and even less than the above amount may be used by having a slow fire. It may be boiled ten or twenty minutes, owing to the amount of water added, after which take off and cool quickly by placing your boiling kettle in cold water and stirring the sirup for a short time. But care must be taken to allow it to remain but a very short time in this position or it will harden in the boiler. One-half minute to one minute is long enough. This required condition can be ascertained by the sirup changing from a clear color to a muddy appearance when it is commencing to grain, when it may be poured out into the receptacles and formed into any sized cakes desired. Paper should always be placed in these receptacles to prevent the candy from adhering to them. We prefer slabs of this candy about one inch thick by four or six inches square. It should be made in flat slabs or cakes for convenience in using it in the hives.

### MANNER OF USING CANDY.

For the ordinary frame hives that are in general use now, opening from the top, candy should be placed directly on the frames over the cluster of bees, and the usual covering of duck or canvas spread over the entire hive, and a packing of chaff or some porous substance placed on top to the depth of eight or ten inches. Where chaff hives are used the upper chamber can readily be filled with chaff; but if single-walled ordinary hives are used an upper story may be added, which will accommodate the candy and packing also. If the bees are in common box hives we would take off the top board or covering and lay the combs bare. When an upper empty chamber can be made to suit the box hive to accommodate the candy and packing, the candy may be placed directly on the combs. A box hive arranged thus is in the best possible shape for wintering, but may be better protected by having an empty chamber to entirely surround it packed with chaff.

### TIME TO FEED CANDY.

Candy may be used any time during winter, providing the adjusting of it is done on a warm day when the bees are on the wing, as a disturbance of bees during cold weather while in their winter doze is injurious to them. The most important period in which to make a liberal use of feed thus prepared is about the first or middle of March, selecting a time when the weather is warm and bees flying. We seldom fail to find many colonies at this time that are needing feed. It may be true that if we allow colonies to have a powerful supply of honey to go into winter quarters, this feeding may not be so necessary, but to make bee-keeping profitable we find it necessary. For the best results we not only feed with candy those that are destitute of stores, but we give this dose to all our colonies, independent of whatever supplies they may have on hand; and we consider this one of the most profitable of "stitches taken in time." Bees will desert their own stores entirely and work on the candy alone. This feed tends to heal colonies that are slightly affected with

dysentery, and at this time of the winter many colonies are slightly affected, and but few escape it entirely. It also gives vigor and health at a time when bees in our climate are most weakened from our long winters. It has a very stimulating effect and will promote brood-rearing in a small degree. After cold weather is fairly gone we prefer to feed sirup, as with sirup-feeding only can we get the best results in brood-rearing; but we should always be careful to stop feeding at the beginning of the honey flow, so that our surplus honey will be strictly pure and contain none of the aforesaid sirup. This is a very important point, and we would have it distinctly understood that we do not feed sirup for the purpose of having it stored up as surplus honey, but only to feed at such times as bees need it for their daily food, or at a time when all such feed is converted into brood for the purpose of strengthening the force of bees, so that we may secure a large force of bees ready for work when the honey season opens.

### THE MOST CONVENIENT FORM OF FEEDING CANDY.

Where frame hives are used the most convenient manner of preparing and feeding candy is to mold it right into the frames, making a solid slab the size of the frame and hanging it into the hive the same as a frame of honey. Or divisions may be made in the frames, by making it in two or four compartments, if we do not wish to use as much as the full-sized frame. After warm weather sets in it matters not as to the quality of feed we use. Any grade of sugar or sirup that they will partake of readily will answer when they are flying daily. Bees will seldom eat sorghum molasses. We have tried it frequently, and we pronounce it worthless as a bee feed. Some of the poorest grades of sugar they look upon also with disgust.

### Mice-Proof Hives.

Chaff hives are a harbor for mice. Nothing suits the little rodents better than to get into a chaff hive where they have the benefit of the warmth of the bees. They are very damaging and will eat up and destroy the entire stores of the colony in a short time, and leave the bees to starve. In making chaff hives great care should be exercised so as to exclude them. The entrance should be just three-eighths of an inch wide, no more, no less. If more than this, it will admit of mice, and if less it will not admit of all the bees in a satisfactory manner. Mice are the most destructive pests we have to contend with in bee-keeping at the present time, I believe. They will render a lot of valuable comb honey worthless for market purposes in a very short time if they gain access to it. They will also destroy empty combs, and especially those containing more or less honey. By opening a chaff hive their presence may be easily detected by the appearance of the chaff which shows their burrowing places. If a thorough search fails to disclose them, they may be gotten rid of by poison.

Thos. Slater has a message for every man on page 15.

### "Among the Ozarks."

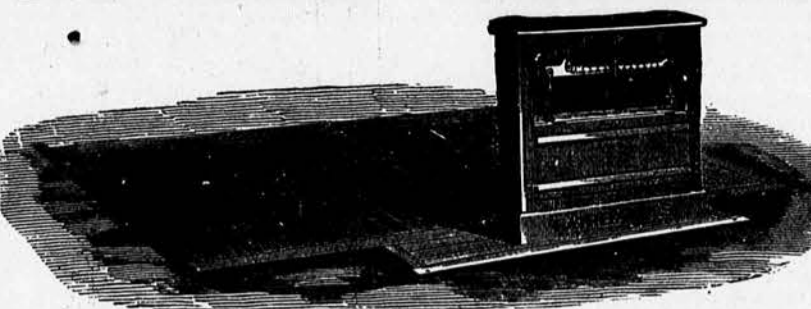
"The Land of Big Red Apples," is an attractive and interesting book, handsomely illustrated with views of South Missouri scenery, including the famous Olden fruit farm of 8,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks, and will prove of great value, not only to fruit-growers but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address,

J. E. LOCKWOOD, Kansas City, Mo.

### Half Rates Plus \$2.

Burlington Route to the West and Northwest, November 3, 17, December 1 and 15, round trip, twenty days limit, to Nebraska, Kansas, Wyoming, Utah, Black Hills, and certain parts of Colorado. Splendid through trains of chair cars (seats free), and handsome compartment observation vestibule sleepers. Only dining car line to Denver via St. Louis and Kansas City, cafe plan (pay only for what you order). The Burlington Route is the original Harvest Excursion line. See the magnificent corn crops of Nebraska. Send to the undersigned for pamphlets on Missouri and Nebraska, and consult local agent for rates and train service. L. W. WAKLEY, General Passenger Agent, St. Louis, Mo.

## Fairbanks' Standard!



Every Stock Feeder, Shipper and Farmer should have FAIRBANKS SCALE with our new Patent Beam. Write for Catalogue of Scales, Windmills, Grinders, Gasoline Engines, Pumps, Tanks, etc.

**FAIRBANKS, MORSE & CO.,**  
1308-1310 UNION AVE. KANSAS CITY, MO.

### Great Rock Island Route Playing Cards.

Send 12 cents in stamps to John Sebastian, General Passenger Agent C. R. I. & P. railway, Chicago, for the slickest pack of playing cards you ever handled, and on receipt of such remittance for one or more packs they will be sent you postpaid. Orders containing 60 cents in stamps or postal note for same amount will secure five packs by express, charges paid.

### Tours in the Rocky Mountains.

The "Scenic Line of the World," the Denver & Rio Grande railroad, offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the trans-continental traveler the grandest scenery. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman sleepers and tourists' cars between Denver and San Francisco and Los Angeles.

Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.

### To St. Paul and Minneapolis via Burlington Route.

Two splendid through trains each day from Missouri river points to the north via the old established Burlington Route and Sioux City line. Day train has handsome observation vestibule sleepers, free chair cars, and dining cars (north of Council Bluffs). Night train has handsome sleepers to Omaha, Council Bluffs and Sioux City, and parlor cars Sioux City north. Consult ticket agent.

L. W. WAKLEY, Gen. Pass. Agt., St. Louis, Mo.

## THE STRAY LIST.

### FOR WEEK ENDING NOV'R 19, 1896.

Edwards county—A. G. Aderhold, clerk. MULE—Taken up by J. M. McCarter, in Franklin tp. (P. O. Fellsburg), October 14, 1896, one moulted male mule, line on back, fifteen hands high; valued at \$15.

### FOR WEEK ENDING NOV'R 26, 1896.

Linn county—William H. Ward, clerk. MARE—Taken up by V. W. Brice, in Blue Mound tp., October 30, 1896, one bay mare, about 4 years old, fifteen hands high, weight about 1,050 pounds, black mare and tall, both hind feet white, star in forehead, lump on left hind ankle; valued at \$20.

Comanche county—J. E. Harbaugh, clerk.

STEER—Taken up by M. Schoub, in Rumsey tp. (P. O. Coldwater), October 24, 1896, one red and white spotted Western steer, 3 years old, medium size, branded A enclosing 7; valued at \$12.50.

Bourbon county—H. Frankenburg, clerk.

PONY—Taken up by C. G. Beaman, in Marion tp., November 2, 1896, one chestnut sorrel horse pony, supposed to be 7 or 8 years old; valued at \$10.

PONY—By same, one clay-bay horse pony, white stripe on face, supposed to be 7 or 8 years old; valued at \$5.

Labette county—J. F. Thompson, clerk.

HORSE—Taken up by E. F. Ferrell, in Mt. Pleasant tp. (near Altamont), October 22, 1896, one bay horse, fifteen hands high, white spot in forehead.

HORSE—By same, one black horse, fifteen and a half hands high, wire cut on left front foot.

Shawnee county—Chas. T. McCabe, clerk.

COLT—Taken up by C. W. Edson (P. O. Silver Lake), one sorrel mare colt, 1 year old past, two white hind feet.

COLT—By same, one black horse colt, 1 year old past, white face, one white hind foot.

Pottawatomie county—Frank Davis, clerk.

STEER—Taken up by C. J. Reed, in Lincoln tp., October 23, 1896, one black and white yearling steer, square drop off left ear, piece of rope in dowel, in distinct brand on left hip, has horns; valued at \$15.

STEER—By same, one red and white yearling steer, branded A on left shoulder and 1 on left hip; valued at \$15.

Wabaunsee county—J. R. Henderson, clerk.

STEER—Taken up by Wm. Breyner, in Newbury tp. (P. O. Paxico), November 2, 1896, one red and white spotted two-year-old steer, small hole in right ear.

Wyandotte county—Leonard Daniels, clerk.

STEER—Taken up by L. E. Scott, in Prairie tp., on or about October 15, 1896, one dark red steer, 2 years old past, split in right ear, seems to have been dehorned; valued at \$15.

### FOR WEEK ENDING DEC'R 3, 1896.

Montgomery county—J. W. Glass, clerk.

HORSE—Taken up by Wm. Adams, in Fawn Creek tp., one black horse, 4 years old, hind feet white.

HORSE—Taken up by R. B. Knook, in Caney tp., October 23, 1896, one black horse, 4 or 5 years old, hind feet white.

### VETERINARY SURGEON.

DR. U. B. McCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

THOS. B. SHILLING, Real Estate and Rental Agency, 115 East Fifth St., Topeka, Kas. Established in 1884. Calls and correspondence invited.

### THE FAMILY MONEY MAKER!

Worth \$100 a year and more to all who own land, a garden, orchard or conservatory; covers, in plain language, by practical men, the care and cultivation of flowers, fruits, plants, trees, shrubs, bulbs, etc., and tells how to make home grounds attractive.

**3 AMERICAN GARDENING 10**  
America's brightest and most reliable gardening and family paper. Established fifty years. Illus. Weekly. \$1.00 a year, WITH HANDSOME PREMIUM.

To introduce it to new readers we will send AMERICAN GARDENING 3 months (12 numbers) to any address on receipt of 10 cents, in stamps or coin. Sample free.

AMERICAN GARDENING, P. O. Box 1697, N. Y.



Soil, roots and plants taken up together, preventing stunting or injury. Vegetables, flowers, strawberries, tobacco, small nursery trees, etc., can be moved at all seasons. Invaluable for filling vacancies. Transplanter with blade 2 inches in diameter, \$1.25; same with 3-inch blade, \$1.50. SPECIAL PRICE with KANSAS FARMER: By a special arrangement with the manufacturers we are able to offer the Transplanter and KANSAS FARMER one year for price of Transplanter alone. Send \$1.25 and we will mail KANSAS FARMER to you and send you the Transplanter by express. Or call at FARMER office and get the Transplanter and save 25c. express charges. Address KANSAS FARMER CO., Topeka, Kas.

## To Cripple Creek

VIA COLORADO SPRINGS

The Chicago, Rock Island & Pacific Railway is

**4 hours quicker**

To Cripple Creek than any other line.

Full particulars by addressing

JOHN SEBASTIAN, G. P. A., Chicago.

## CRIPPLE CREEK

The Santa Fe Route is the most direct and only through broad-gauge line from Chicago and Kansas City to the celebrated Cripple Creek gold mining district. Luxurious Pullmans, free chair cars, fastest time, and low rates.

## GOLD! GOLD!!

Address G. T. Nicholson, G. P. A., A. T. & S. F. Rv., Monadnock Bldg., Chicago, or W. J. Black, A. G. P. A., Topeka, Kas., and ask for free copy of profusely illustrated book descriptive of Cripple Creek. It is well worth reading.

## SANTA FE ROUTE

BEDWETTING CURED. Sample FREE. Dr. F. E. MAY, Bloomington, Ill.

## The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, DR. N. S. MAYO, Professor of Veterinary Science, Kansas State Agricultural college, Manhattan, Kas.

**OPHTHALMIA.**—My colts (3 years old) are affected with some disease of the eye. The eye seems weak, discharges tears and is feverish. The eyelids nearly closed. The eyeball seems sunken and takes a leaden or yellowish color. W. S. C.

**Answer.**—Your colts have ophthalmia (inflammation of the eye). Separate those affected from the rest of the horses. Bathe the eyes for fifteen minutes twice daily with hot water, wipe dry, and use as a lotion, boracic acid, forty grains, dissolved in four ounces of pure rainwater.

**INDIGESTION.**—I have a four-year-old horse that is thin and not doing well. He has been this way since last spring. He purges frequently. E. F. H.

Adrian, Kas.

**Answer.**—Examine his mouth and see that his teeth are all right. Give him a quart of raw linseed oil. Feed him ground feed, one part of bran to two parts of corn meal, with a handful of oil meal. Also give the following: Nux vomica seed, pulverized, 1 ounce; gentian root, pulverized, 3 ounces; potassium nitrate, pulverized, 2 ounces; iron sulphate, pulverized, 1 ounce. Mix thoroughly and give a small tablespoonful in feed morning and night.

**GLANDERS.**—I have a mare that for some months has been discharging greenish pus from the right nostril; to-day she bled from the left nostril. I think her teeth are all right. I am afraid she has glanders. What course should I pursue to avoid a total loss should she have to be destroyed? She is well bred. L. L. B.

**Answer.**—Your horse has symptoms of glanders, but it is impossible to tell with any certainty without an examination. You should notify the State Live Stock Sanitary Commission. This State does not pay for horses which are condemned for glanders.

**LEUCORRHEA.**—I have a cow that calved September 3. She is not doing well, falling away in flesh and giving but little milk. There is a light-colored slimy discharge from the vagina. Ottawa, Kas. C. O. F.

**Answer.**—With a large syringe and rubber tube, wash out the vagina with warm water until it runs clear and then inject the following: Zinc sulphate, 1 ounce; rainwater, 3 pints. Use once daily until the discharge ceases. Feed the cow well.

### Cerebritis, or "Staggers."

Within the past ten days numerous reports have been received of horses dying from some strange disease, popularly called "staggers," or "mad staggers," according to symptoms exhibited. Most of the reports have come from the northern and western parts of the State.

In the fall and winter of 1890 and 1891 this same disease prevailed extensively in Kansas, and a large number of horses died. I investigated the disease at that time, and found that the disease is an inflammation of the brain (cerebritis) and that it is caused by the animals eating wormy or moldy corn. Most of the cases occurred among horses that were pastured in the stalk field or used in gathering corn. Some cases resulted from feeding corn or corn meal. The results of that investigation are given in Bulletin 24 of the Kansas Experiment Station.

In 1890 the green corn was somewhat injured by attacks of the green corn worm, and wherever the grains of corn were injured by the worm a mold grew. This wormy, moldy corn and worm dust undoubtedly causes inflammation of the brain in horses. As the corn of this season's growth has an unusually large amount that is wormy, a considerable loss of horses will possibly result.

The first symptoms usually noticed are dullness, refusal of food, the ani-

## Horse Owners! Use



## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blisters from Horses and Cattle. SUPERSEDES ALL CAUSTIC OR FIRING. Impossible to produce scar or blister. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

mal often standing braced against the manger or wall. There is partial or complete loss of sight and consciousness, and death usually following within forty-eight hours. Sometimes the animal becomes delirious and is liable to injure himself or attendants. The heart's action is weak and irregular, the bowels usually constipated, the breathing is usually slower than normal and there is little or no fever. Post-mortem examination shows inflammation of the brain with slight irritation (redness) of intestines.

Treatment seems to have little effect, but few cases recover. The bowels should be emptied by an enema (injection) of warm water and a purgative ball of from six to eight drams of aloes given, followed by two-dram doses of bromide of potash dissolved in water, given every four hours. Care should be exercised not to excite the horse or choke him in giving the medicine, as they are often unable to swallow. Be very careful and not get hurt yourself.

The best way to deal with this disease is to prevent it by not feeding the wormy corn. Mules or other animals, except horses, do not seem to be affected by the moldy corn. In 1891 no cases occurred, to my knowledge, after March. The injurious principle seemed to disappear about that time. Experiments are now being made to determine just what the injurious principle is. N. S. MAYO.

State Agricultural College, Manhattan.

### MARKET REPORTS.

**Kansas City Live Stock.**  
KANSAS CITY, Nov. 30.—Cattle—Receipts since Saturday, 9,133; calves, 3,000; shipped Saturday, 2,339 cattle, 602 calves. Best grades of natives were strong; others generally steady. The following are representative sales:

**SHIPPING AND DRESSED BEEF STEERS.**

No.	Ave. Price.	No.	Ave. Price.
20.....	1.24 1/2	16.....	1.40 1/2
185.....	1.13 1/2	40.....	1.10 1/2
42.....	1.17 1/2	94.....	1.13 1/2
44.....	1.17 1/2	35.....	1.13 1/2

**TEXAS AND INDIAN STEERS.**

No.	Ave. Price.	No.	Ave. Price.
103.....	84 1/2	20.....	93 1/2
18.....	80 1/2		

**NATIVE HEIFERS.**

No.	Ave. Price.	No.	Ave. Price.
52.....	75 1/2	37.....	77 1/2
6.....	81 1/2	1.....	80 1/2
38.....	75 1/2		

**NATIVE COWS.**

No.	Ave. Price.	No.	Ave. Price.
3.....	93 1/2	4.....	1.25 1/2
8.....	1.01 1/2	6.....	1.17 1/2
13.....	1.11 1/2	5.....	1.02 1/2
1.....	1.06 1/2	1.....	73 1/2

**NATIVE FEEDERS.**

No.	Ave. Price.	No.	Ave. Price.
15.....	1.00 1/2	1.....	1.17 1/2
47.....	1.04 1/2	3.....	1.27 1/2
14.....	1.00 1/2	2.....	90 1/2
1.....	1.08 1/2	2.....	95 1/2

**NATIVE STOCKERS.**

No.	Ave. Price.	No.	Ave. Price.
1.....	84 1/2	28.....	59 1/2
18.....	63 1/2	7.....	67 1/2
34.....	68 1/2	4.....	87 1/2
1.....	49 1/2	2.....	74 1/2

Hogs—Receipts since Saturday, 7,018; shipped Saturday, none. The market was 5 to 100 higher and active. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.
79.....	219 1/2	75.....	200 1/2
79.....	207 1/2	75.....	215 1/2
73.....	223 1/2	68.....	225 1/2
60.....	189 1/2	80.....	201 1/2
90.....	240 1/2	93.....	240 1/2
58.....	231 1/2	29.....	232 1/2
25.....	242 1/2	67.....	236 1/2
9.....	191 1/2	75.....	251 1/2
59.....	291 1/2	56.....	291 1/2
60.....	340 1/2	64.....	307 1/2
55.....	341 1/2	29.....	320 1/2
1.....	320 1/2	3.....	343 1/2
83.....	150 1/2	10.....	434 1/2
2.....	410 1/2	7.....	448 1/2
1.....	250 1/2	1.....	380 1/2
2.....	87 1/2	2.....	115 1/2
2.....	255 1/2	1.....	210 1/2

Sheep—Receipts since Saturday, 3,932; shipped Saturday, 1,182. The market was 10 to 150 higher on fat grades. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.
13 Ut. lbs.....	71 1/2	15 sw.....	74 1/2
910 Utah.....	111 1/2	40 Utah.....	107 1/2

**Chicago Live Stock.**  
CHICAGO, Nov. 30.—Cattle—Receipts, 15,000; market strong to 100 higher; fair to best beefs, \$3.50 to \$3.45; stockers and feeders, \$2.70 to \$2.60; mixed cows and bulls, \$1.60 to \$1.40; Texas, \$2.60 to \$2.45.

Hogs—Receipts, 29,000; market active and 5 to 100 higher; light, \$3.35 to \$3.55; rough packing, \$3.20 to \$3.10.

Sheep—Receipts, 1,000; market strong. Heavy packing and shipping, \$3.35 to \$3.70; pigs, \$2.90 to \$2.85.

St. Louis Live Stock.  
ST. LOUIS, Nov. 30.—Cattle—Receipts, 4,000; market 100 higher. Hogs—Receipts, 7,000; market 5 to 100 higher. Yorkers, \$3.40 to \$3.50; packers, \$3.20 to \$3.45; heavy, \$3.10 to \$3.50.

Chicago Grain and Produce.  
Nov. 30. Opened High'st Low'st Closing

Nov. 30.	Opened	High'st	Low'st	Closing
Wh't—Nov.....	81 1/2	82 1/2	81 1/2	81 1/2
Dec.....	81 1/2	82 1/2	81 1/2	81 1/2
May.....	81 1/2	82 1/2	81 1/2	81 1/2
Corn—Nov.....	23 1/2	23 1/2	23 1/2	23 1/2
Dec.....	23 1/2	23 1/2	23 1/2	23 1/2
May.....	23 1/2	23 1/2	23 1/2	23 1/2
Oats—Nov.....	19 1/2	19 1/2	18 1/2	18 1/2
Dec.....	19 1/2	19 1/2	18 1/2	18 1/2
May.....	19 1/2	19 1/2	18 1/2	18 1/2
Pork—Nov.....	7 1/2	8 1/2	7 1/2	7 1/2
Jan.....	8 1/2	8 1/2	8 1/2	8 1/2
May.....	8 1/2	8 1/2	8 1/2	8 1/2
Lard—Nov.....	3 1/2	3 1/2	3 1/2	3 1/2
Jan.....	4 1/2	4 1/2	4 1/2	4 1/2
May.....	4 1/2	4 1/2	4 1/2	4 1/2
Ribs—Nov.....	4 1/2	4 1/2	4 1/2	4 1/2
Jan.....	4 1/2	4 1/2	4 1/2	4 1/2
May.....	4 1/2	4 1/2	4 1/2	4 1/2

**Kansas City Grain.**  
KANSAS CITY, Nov. 30.—The local wheat market was strong early, but closed steady with Saturday's prices. Receipts were fair, but the demand was limited, coming principally from millers. The elevators were not in the market to any extent.

Receipts of wheat to-day, 60 cars; a year ago, 118 cars.

Sales were as follows on track: Hard, No. 2, nominally 82 1/2¢; No. 3, 1 car 80¢, 1 car 79¢, 1 car 77¢; No. 4, 1 car 75¢, 1 car 73¢, 3 cars 72¢, 2 cars 71¢, 1 car 70¢, 1 car 69¢, 1 car 68¢, 1 car 67¢, 1 car 66¢, 1 car 65¢, 1 car 64¢, 1 car 63¢, 1 car 62¢, 1 car 61¢, 1 car 60¢, 1 car 59¢, 1 car 58¢, 1 car 57¢, 1 car 56¢, 1 car 55¢, 1 car 54¢, 1 car 53¢, 1 car 52¢, 1 car 51¢, 1 car 50¢, 1 car 49¢, 1 car 48¢, 1 car 47¢, 1 car 46¢, 1 car 45¢, 1 car 44¢, 1 car 43¢, 1 car 42¢, 1 car 41¢, 1 car 40¢, 1 car 39¢, 1 car 38¢, 1 car 37¢, 1 car 36¢, 1 car 35¢, 1 car 34¢, 1 car 33¢, 1 car 32¢, 1 car 31¢, 1 car 30¢, 1 car 29¢, 1 car 28¢, 1 car 27¢, 1 car 26¢, 1 car 25¢, 1 car 24¢, 1 car 23¢, 1 car 22¢, 1 car 21¢, 1 car 20¢, 1 car 19¢, 1 car 18¢, 1 car 17¢, 1 car 16¢, 1 car 15¢, 1 car 14¢, 1 car 13¢, 1 car 12¢, 1 car 11¢, 1 car 10¢, 1 car 9¢, 1 car 8¢, 1 car 7¢, 1 car 6¢, 1 car 5¢, 1 car 4¢, 1 car 3¢, 1 car 2¢, 1 car 1¢, 1 car 0¢.

## BROOMCORN

ESTABLISHED 1873  
ON CONSIGNMENT OR  
SOLD DIRECT.

We carry the largest stock of Broom Manufacturers' Supplies in the United States. Correspondence solicited.  
J. P. GROSS & CO., 239-241 Kinzie St., Chicago, Ill.

## BROOMCORN F. JELKE & SON

Established 1850.

53 Walnut St., Cincinnati, O.

Cash Advances Made on All Consignments.

REFER TO ANY CINCINNATI BANK.  
WRITE FOR FULL PARTICULARS.

Commission Merchants and Dealers in  
Broomcorn and all kinds of Broom  
Materials and Machinery.

## The Kansas City Stock Yards

are the most complete and commodious in the West,

and second largest in the world! The entire railroad system of the West and Southwest centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts for 1895.....	1,689,652	2,457,697	864,713	52,607	103,366
Slaughtered in Kansas City.....	922,167	2,170,827	507,015		
Sold to feeders.....	392,263	111,445	1,376		
Sold to shippers.....	215,205	276,959	69,784		
Total Sold in Kansas City, 1895.....	1,533,634	2,446,202	748,244	41,588	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST,  
V. Pres. and Gen. Manager. Secretary and Treasurer. Assistant Gen. Manager. Gen. Superintendent.  
W. S. TOUGH & SON, Managers HORSE AND MULE DEPARTMENT.

\$3.20 to \$3.30; mixed and butchers, \$3.35 to \$3.70; heavy packing and shipping, \$3.35 to \$3.65; pigs, \$2.90 to \$3.65.

Sheep—Receipts, 12,000; market 5 to 10¢ higher; native, \$2.00 to \$2.15; western, \$2.15 to \$2.60; lambs, \$3.50 to \$5.50.

### St. Louis Live Stock.

ST. LOUIS, Nov. 30.—Cattle—Receipts, 4,000; market 100 higher.

Hogs—Receipts, 7,000; market 5 to 10¢ higher; Yorkers, \$3.40 to \$3.50; packers, \$3.20 to \$3.45; heavy, \$3.10 to \$3.50.

Sheep—Receipts, 1,000; market strong.

### Chicago Grain and Produce.

Nov. 30. Opened High'st Low'st Closing

Nov. 30.	Opened	High'st	Low'st	Closing
Wh't—Nov.....	81 1/2	82 1/2	81 1/2	81 1/2
Dec.....	81 1/2	82 1/2	81 1/2	81 1/2
May.....	81 1/2	82 1/2	81 1/2	81 1/2
Corn—Nov.....	23 1/2	23 1/2	23 1/2	23 1/2
Dec.....	23 1/2	23 1/2	23 1/2	23 1/2
May.....	23 1/2	23 1/2	23 1/2	23 1/2
Oats—Nov.....	19 1/2	19 1/2	18 1/2	18 1/2
Dec.....	19 1/2	19 1/2	18 1/2	18 1/2
May.....	19 1/2	19 1/2	18 1/2	18 1/2
Pork—Nov.....	7 1/2	8 1/2	7 1/2	7 1/2
Jan.....	8 1/2	8 1/2	8 1/2	8 1/2
May.....	8 1/2	8 1/2	8 1/2	8 1/2
Lard—Nov.....	3 1/2	3 1/2	3 1/2	3 1/2
Jan.....	4 1/2	4 1/2	4 1/2	4 1/2
May.....	4 1/2	4 1/2	4 1/2	4 1/2
Ribs—Nov.....	4 1/2	4 1/2	4 1/2	4 1/2
Jan.....	4 1/2	4 1/2	4 1/2	4 1/2
May.....	4 1/2	4 1/2	4 1/2	4 1/2

When you write mention Kansas Farmer.

## GRASS AND FIELD SEEDS

MITCHELL & RAMSEY,  
ST. JOSEPH, MISSOURI.

## HORSES SOLD AT AUCTION

on Tuesday, Wednesday and Thursday of each week. Private sales every day at the Kansas City Stock Yards Horse and Mule Department. The largest and finest institution in the United States. Write for free market reports.

W. S. TOUGH & SON, Managers,  
KANSAS CITY, MO.

## Harper's Magazine

IN 1897.

FICTION: The Martian, the new novel by DU MAURIER, the eagerly expected successor to "Trilby," begun in October number, 1896, with illustrations from the author's drawings. A new novel by FRANK R. STOCKTON—developing a Twentieth Century Renaissance—full of humorous situations and characteristically illustrated. A Pair of Patient Lovers, by WILLIAM DEAN HOWELLS. Other striking novelettes by American authors. Short stories by MARK TWAIN, THOMAS NELSON PAGE, RICHARD HARDING DAVIS, OWEN WISTER, JOHN KENDRICK BANGS, RUTH MCENERY STUART, OCTAVE THANE, MARY E. WILKINS, and other popular writers.

SCIENCE: Story of the Progress of Science during the Nineteenth Century, a series of papers by Dr. HENRY SMITH WILLIAMS, supplemented by contributions on special subjects by expert scientists. Articles on the relations of curious psychological manifestations to physiology by Dr. ANDREW WILSON.

AMERICAN FEATURES: The Mexico of To-day, a series by CHARLES F. LUMMIS, splendidly illustrated—the result of a recent visit to Mexico undertaken for HARPER'S MAGAZINE. Mexico is pre-eminently a silver-producing country, and its monetary operations rest entirely on a silver basis. Owing to the keen discussion of certain economic problems in connection with issues of urgent importance in American politics, these papers will command general attention. American Historical Papers by WOODROW WILSON, JOHN BACH MACMASTERS, and JAMES BARNES. The true story of Sheridan's Ride, by Gen. G. A. FORSYTH. Continuation of HOWELLS' Personal Reminiscences of eminent literary Americans.

AFRICA AND THE EAST: White Man's Africa, a fully illustrated series of papers by POULTNEY BIGELOW, the result of personal observations during a recent trip to Africa, covering the whole field of European exploitation of that country. Illustrated articles by STEPHEN BONSAL on the transformations going on in Eastern Siberia, recently visited by the author. Hungarian Sketches, written and drawn by F. HOPKINSON SMITH. The full story of the recent Coronation of the Czar, by RICHARD HARDING DAVIS, illustrated by R. CATON WOODVILLE, who was commissioned by Queen Victoria to paint a picture of the ceremony.

Newspapers are not to copy this advertisement without the express order of Harper & Brothers.

HAR

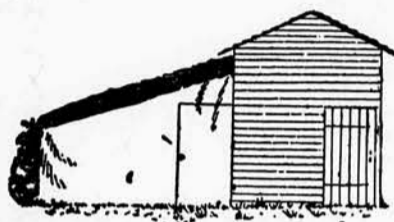
## The Poultry Yard

### KEEP THEM SCRATCHING.

It is the Best Way to Exercise Poultry in the Winter.

The sketch herewith shows the "second-best" scratch room for my fowls this winter, which proved so useful last season. A frame 12x16 feet of posts, poles and brush, and upon the brush roof, fodder piled deep will be the style of it. The north and west will be banked with bound bundles of the fodder, the east end will be against the west end of the main poultry house, and the south, which is the front, will be muslin covered. The muslin breaks the wind and cold from them, and allows the sun to shine in across the whole floor. The muslin-covered door opens into the room from the yard. This for my make-shift scratch-room.

Besides this I have a permanent scratch-room, which is a very necessary part of the poultry plant. This is upon the east end of the poultry house, is



SCRATCH ROOM ADDITION TO POULTRY HOUSE.

12x15 feet, 6 feet high in front and slopes to 4 feet high at the back. The roof is shingled and the front that was once muslin-covered, is now of boarding and windows, for throughout the year it is in use for different purposes. This room is divided into two compartments by wire fence netting, for summer use as rooms for breeding stock or for hens and chicks. But when used for a winter scratch-room, the door is left open and they have all the room to work in. The floor is deep covered with straw, and the fowls are kept sufficiently hungry to keep them scratching. Small doors, less than a foot square, open into either room from the roosting, or main house.

When the weather is dry and the corn fodder palace (?) perfectly dry, they are divided into two flocks. But should the fodder-built room become damp, they all go to the room that is dry and warm. Sometimes they are a little crowded. But as soon as their house is cleaned in the morning, they have that room also to exercise in.

The cost of such a permanent scratch-room is not great. And the one constructed of fodder costs nothing at all except the work, for the refuse brush, poles, etc., are found upon almost any farm. If you have not the fodder in available shape, you have surely plenty of straw. Many farmers have their supply of straw baled every year. Such material as baled straw to bank the sides of such a room could scarce be surpassed. Once the scratch-room theory is put into practice in one's poultry yards, the practice will never be abandoned, for the birds must have exercise. —Orange Judd Farmer.

### FOODS FOR POULTRY.

Why It Is More Advantageous to Feed Everything Dry.

The natural food of fowls is composed of seeds, insects and grass. In the domestic condition we allow grain, grass and meat. Turkeys and chickens drink very little water when feeding, and even ducks and geese resort to water when feeding sometimes, in order to wash their bills more than to drink, says the Poultry Keeper.

This brings up the question of the propriety of feeding soft food. It is known that ground grain absorbs a large volume of water, and when the mixture is apparently dry, quite a large proportion of water exists in it, though more so when the mixture is very moist and sloppy. It is not beneficial water, as the results are sometimes injurious, bowel disease and indigestion prevailing.

It is better to feed all food dry, if possible, and keep a trough full of water where the fowls can take what quantity they desire. Even ground food may be given in a dry condition,

the different substances used being thoroughly mixed and placed in a trough. When chicks are fed they have cornmeal moistened several times a day, and bowel disease results simply because too much water is forced upon them in the food. The fowls never resort to wet food when they can get dry kinds, and this is a matter that deserves attention.

### THE HENS IN WINTER.

Kind of Treatment Which Induces a Good Egg Supply.

In order to have a good supply of eggs during the winter it is essential to have either early-hatched pullets that have been kept growing and are reasonably well matured or two-year-old hens that moulted early, and are in a good thrifty condition when winter begins.

Then warm, dry quarters must be provided. No matter how well fed the fowls may be, they will not lay well unless they are kept comfortable. The quarters should be roomy, so that when closely confined, as will be necessary on cold, stormy days, they will have plenty of room to exercise.

The roosts should be on a level, not over three feet from the ground, and arranged so that they can be taken down to clean when necessary. When it can be done the nests should be in a separate place, rather darker than the rest of the house, so that the laying hens will not be disturbed by the others. There should be room to feed them away from under the roosts. Brood boards should be provided on which the soft food can be placed. Have the quarters dry.

The hens must be regularly and well fed if they are kept in a good laying condition. Gather up the scraps from the table, the paring and the leavings of the vegetables from the kitchen, put them into a pot that should be kept in the stove. Usually it will cook sufficiently through the day and can be warmed up while breakfast is being cooked. If the quantity is not sufficient add wheat, bran and milk to make up a good feed. Give it warm—not hot—for breakfast, and try to have it ready as soon as they fly down from the roosts. At noon give whole wheat, oats, sorghum seed or something of this kind, changing often enough to make a good variety.

At night give a good feed of whole corn just before they go to roost. Water regularly and keep the drinking vessels clean.

With eggs to sell in winter the hens will be found profitable.—St. Louis Republic.

### A Good Male Parent.

EDITOR KANSAS FARMER:—We have a case of such unusual occurrence, the like of which we never heard of before, that we have concluded to report it for the FARMER. Last spring we obtained a pair of white bantams, from which were hatched a brood of young chicks. When they were about a month old, the mother hen was accidentally killed, when the cock immediately took charge of the young brood and has reared them just as well as their mother could have done, hovering them at night, leading them about during the day, clucking for them just like a hen would do, finding feed for them and calling them to it, and standing aside while they eat it, and caring for them with as much solicitude as the mother hen would have done. This instance being of such a remarkable nature we think it deserves a notice in your excellent farm journal, and if any other person has ever had a similar experience with their fowls we think that they ought to report it likewise.

P. C. BOWEN & SON.  
Cherryvale, Kas.

\$100 Reward \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer one hundred dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75 cents.

**GARLAND STOVES AND RANGES**

*The World's Best*

A full and complete line of Cooking and Heating goods for all kinds of fuel, made by the same mechanics and of the same material as "Garlands." "Michigans" are the peer of ANY other line EXCEPT "Garlands."

**MICHIGAN STOVES AND RANGES**

THE MICHIGAN STOVE COMPANY, Largest Makers of Stoves and Ranges in the World.

**LIGHTNING HAY PRESS**

STEEL

Special prices.

Kansas City Hay Press Co., 129 Mill St. Kans. City Mo.

**A SMALL THRESHING MACHINE:**

Something new for the farmer, who can now do his own threshing, with less help and power than ever before. We also make a full line of Sweep Powers, Tread Powers, etc.

**THE COLUMBIA THRESHER** has great capacity, and can be run by light power. Send for illustrated Catalogue, giving testimonials.

**BELLE CITY FEED AND ENSILAGE CUTTERS**

Made in all sizes, for both hand and power use. Send for illustrated Catalogue and Price List. We will send latest publication on Ensiling to all who write for it.

**BELLE CITY MFG. CO.** BOX 85, Racine, Wis.

**THE IMPROVED VICTOR Incubator**

Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class hatcher in the market. Circulars FREE.

GEORGE ETEL CO., QUINCY, ILL.

**HATCH Chickens BY STEAM** With the MODEL EXCELSIOR Incubator

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made.

GEORGE H. STAHL, 114 to 122 N. 6th St. Quincy, Ill.

**A GOLD DOLLAR**

is about the actual worth of our new book on Incubation and Poultry. Contains a full and complete description of the Reliable Incubator & the Brooder of same name, together with cuts and instructions for building poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c.

**RELIABLE INCUBATOR & BROODER CO., QUINCY, ILL.**

**DEAD EASY!**

The Great Disinfectant Insecticide

**KILLS HEN LICE**

By simply painting roosts and dropping-boards. Kills Mites and Lice, cures Colds and Cholera, also kills Hog Cholera germs. If your grocer or druggist does not keep it, have them send for it.

**THOS. W. SOUTHWARD,**  
Gen. Agent, 628 Delaware St., Kansas City, Mo.

All kinds of new-  
acquaintances names.  
Mention for stamp.

**WE BUY** paper clippings and \$50 a thousand. Par-  
mentals for stamp. NEWS CLIPPING CO., Dept. H.N., 204 W. 129th St., N.Y.

**INFORMATION GOLD!**

Worth its Weight in Gold!

For your name and address on a postal card, we will tell you how to make the best wire fence on earth, horse-high, bull-strong and pig-tight, at the actual wholesale cost of wire. Kitzelman Bros. Box B. Ridgeville, Ind.

**How About That Line Fence?**

Would it not be well to get together and adjust the matter, and then put up a permanent fence? If John Bull and Venezuela had done that years ago it would have saved Uncle Sam lots of trouble. If "Schomberg" had put 10 bar Page on his line, there would have been no trespassing.

**PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

**Wanted, an Idea.**

Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write John Wedderburn & Co. Patent Attorneys, Washington, D. C. for their \$1,800 prize offer and list of 200 inventions wanted.

**Pennyroyal Pills**

Chichester's English Diamond Brand.

Original and Only Genuine.

SAFE, always reliable. Ladies ask Druggist for Chichester's English Diamond Brand in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Refuse dangerous substitutions and imitations. At Druggists, or send 4c. in stamps for particulars, testimonials and "Killer for Ladies," in letter, by return Mail. 10,000 Testimonials. Name Paper. Chichester Chemical Co., Madison Square, Philada., Pa.

Sold by all Local Druggists.

**\$4.00 DO YOU WANT A JOB** SEND  
EASILY MADE STAR NAME FASTENER CO. CHICAGO, ILL.

**J.C. DRIVING BIT Still King**  
THE BIT OF BITS.  
Will control the most vicious horse.  
Sales Greater Than Ever.  
Sample mailed XC for \$1.00  
Nickel, \$1.50.  
Stallion Bits 50 cts. extra.  
RACINE MALLEABLE IRON CO., RACINE, WIS.

This is the **QUAKER CITY GRINDING MILL**  
For CORN and COBS,  
FEED, and TABLE  
MEAL. Improved for '97.  
Send for all mills advertised.  
Keep the best—return all others.  
**A.W. STRAUB & CO.**  
Philada., Pa., and 41 S. Jefferson St., Chicago, Ill.

"JONES HE PAYS THE FREIGHT."  
**Farm and Wagon SCALES.**  
United States Standard. All Sizes and All Kinds.  
Not made by a trust or controlled by a combination.  
For Free Book and Price List, address  
**JONES OF BINGHAMTON,**  
Binghamton, N. Y., U.S.A.

We make Steel Windmills, Steel  
Towers and Feed Grinders  
and are selling them  
cheaper than  
the cheapest.  
Our produc-  
tions are standard; are first-  
class in every respect and are  
sold on trial. Send us a postal and we will tell you  
all about them. **CURRIE WINDMILL CO.,**  
AGENTS WANTED Manhattan, Kas.

**LIGHTNING WELL MACH'Y**  
PUMPS, AIR LIFTS.  
GASOLINE ENGINES.  
CIRCULARS FREE  
THE AMERICAN WELL WORKS.  
AURORA, ILL. - CHICAGO - DALLAS, TEX.

**Portable Well Drilling MACHINERY**  
Established 1867. Covered by patents.  
Machines drill any depth, both by  
steam and horse power. We chal-  
lenge competition. Send for free  
illustrated catalogue.  
Address, **KELLY & TANEYHILL,**  
WATERLOO, IOWA.

**RUSSELL'S STAPLE PULLER**  
AND WIRE SPICER

A combination tool used  
in repairing and remov-  
ing wire fences. Price  
\$1.25. Drives and pulls  
staples, cuts and splices  
wire. Its special use is  
in building and repair-  
ing wire fences, but may  
be used for many differ-  
ent purposes about a  
farm. Saves its cost in  
one day's work. You can't  
afford to be without it.  
Ask your hardware merchant for it, or address  
**Russell Hardware & Implement Manuf'g Co.,**  
Kansas City, Mo.

**IT'S RELIABLE**  
The Best and Cheapest  
Mill on Earth. Fully  
warranted. Will not  
choke. Write at  
once for prices and  
Agency.  
Prices lowest.  
Quality best.  
It grinds more grain  
to any degree  
of fineness than  
any other mill.  
Corn, ear or shelled,  
Oats, Wheat, &c., fine  
enough for any purpose.  
Made only by  
**Stevens Manuf'g Co**  
**JOLIET, ILL.,**  
Jobbers and Manufac-  
turers of Wagons, Farm  
Machinery, Windmills.

16 oz. to 1 lb. Gold, silver or currency buys the  
best scales made at lowest prices.  
Don't be humbugged by Agents of  
a Trust, Buy of the Manufacturers.

**U. S. Standard**  
Hundreds of Specialties at less than Wholesale prices, viz:  
Sewing Machines, Bicycles, Organs, Pianos, Solder Mills,  
Carriages, Carts, Buggies, Harness, Saws, Bone Mills,  
Letter Presses, Jack Screws, Trucks, Anvils, Hay Cutters,  
Press Stands, Feed Mills, Stoves, Drills, Road Plows,  
Corn Shellers, Coffee Mills, Forges, Lathes, Dump Carts,  
Fanning Mills, Hand Carts, Engines, Tools, Wire Fence,  
Crow Bars, Rollers, Watches, Clothing &c.  
Hay, Stock, Elevator, Railroad, Platform and Counter SCALES.  
Send for free Catalogue and see how to Save Money.  
151 S. Jefferson St. CHICAGO SCALE CO., Chicago, Ill.  
When you write mention Kansas Farmer.

## WE MAKE WHEELS, TOO!

We make them easy-running, durable, satisfactory, and the  
finish is far beyond any other you have ever seen. ....

Our Catalogue gives you a full description. If you want one we will send  
it, if you will drop us a line.

**National Sewing Machine Co., Belvidere, Ill.**

## HORSES AND POULTRY

Every owner of either fowls or horses  
should have a copy of these .....

## TWO GREAT BOOKS

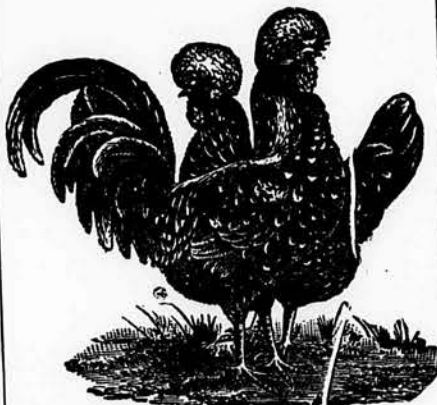
New and Complete  
**POULTRY BOOK** **THE HANDY HORSE BOOK**

By C. E. THORNE,  
Director Ohio Agricultural Experiment  
Station.

**224 PAGES.**  
**92 ILLUSTRATIONS.**

Many new and advanced ideas are giv-  
en, which, if followed, will enable you to  
secure more satisfactory results, whether  
you are raising poultry for the market or  
for home use.

It is not generally known that the food best  
adapted to producing fat is not the best for  
producing eggs, but this book will tell what



is the best for each purpose, as well as the  
best kinds of poultry to raise for eggs and  
for the market.

All poultry is subject to disease, and  
here will be found the proper cures for all  
known diseases.

The complete index, listing 372 differ-  
ent subjects, covers almost every point on  
which the poultry raiser desires informa-  
tion.

These books are printed on good, clean white paper, and the type is  
new, clear and distinct; in fact, they are first-class in every respect,  
being edited by well-known men who are authorities in their respective  
lines.

## Both Books Free

To any one who will comply with the following OFFER! Send us \$2 for two  
years' subscription to KANSAS FARMER, and the two Books will be sent as a  
premium. Or, send us \$1.20, and we will send KANSAS FARMER one year  
and both Books to any address.

Address

**KANSAS FARMER CO., Topeka, Kas.**

Please mention "Kansas Farmer" when writing to our advertisers!

## TO THE EAST

CHICAGO,  
ROCK ISLAND & PACIFIC  
RAILWAY.

The Rock Island is foremost in adopting  
any plan calculated to improve speed and  
give that luxury, safety and comfort that the  
popular patronage demands.

Its equipment is thoroughly complete with  
Vestibuled Trains,

**BEST DINING CAR SERVICE**  
IN THE WORLD,

Pullman Sleepers, Chair Cars, all the most  
elegant and of recently improved patterns.  
Its specialties are

**FAST TIME,**  
**COURTEOUS EMPLOYEES,**  
**FIRST-CLASS EQUIPMENT and**  
**FIRST-CLASS SERVICE GIVEN.**

For full particulars as to Tickets, Maps,  
Rates, apply to any Coupon Ticket Agent  
in the United States, Canada or Mexico or  
address

**JOHN SEBASTIAN, G. P. A.,**  
CHICAGO, ILL.

**Burlington**  
Route

**SOLID THROUGH VESTIBULED TRAINS**  
Kansas City, St. Joseph,  
Leavenworth, Atchison,

TO  
ST. LOUIS, CHICAGO, OMAHA,  
PEORIA, ST. PAUL & MINNEAPOLIS.

WITH  
**Dining Cars, Sleepers**  
**and Chair Cars (Seats Free).**

**CONNECTIONS MADE AT**  
**St. Louis, Chicago & Peoria**  
FOR  
**All Points East, South & Southeast.**

**L. W. Wakeley, G. P. A.,**  
ST. LOUIS, MO.  
**Howard Elliott, Gen. Mgr.,**  
ST. JOSEPH, MO.  
**H. D. Dutton, T. P. A.,**  
ST. JOSEPH, MO.  
**H. C. Orr, A. G. P. A.,**  
KANSAS CITY, MO.

**SPECIALTY!** Private Diseases and Dis-  
eases of the Rectum. Cor-  
respondence solicited. DR. WM. H. RIGHTER,  
503 Kansas Ave., Topeka, Kas.



## Vitality MEN Restored.

Falling Sexual Strength in old or young men can be  
quickly and permanently cured by me to a healthy  
vigorous state. Sufferers from.....

**NERVOUS DEBILITY,**  
**WEAKNESS, VARICOCELE,**

AND ALL WASTING DISEASES should write  
to me for advice. I have been a close student for  
many years of the subject of weakness in men, the  
fact is, I was a sufferer myself. Too bashful to seek  
the aid of older men or reputable physicians I inves-  
tigated the subject deeply and discovered a simple  
but most remarkably successful remedy that com-  
pletely cured me. I want every young or old man  
to know about it. I take a personal interest in such  
cases and no one need hesitate to write me as all  
communications are held strictly confidential. I  
send the recipe of this remedy absolutely free of  
cost. Do not put it off but write me fully at once,  
you will always bless the day you do so. Address

**THOMAS SLATER, Box 960,**  
Shipper of Famous Kalamazoo Celery,  
KALAMAZOO, MICH.

**HENRY W. ROBY, M. D.,**  
**SURGEON.**  
Office: 730 Kansas Ave., TOPEKA, KAS.

## Special Want Column.

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

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

**BLACK LANGSHANS EXCLUSIVELY.**—A few choice early-hatched cockerels for sale. A. S. Parson, Garden City, Kas.

**FOR SALE.**—Eighty, 120 or 200 acres of well-improved land, well watered, three miles from Linwood. I will sell on reasonable terms. For particulars address Samuel Boaz, Linwood, Kas.

**HIGH-CLASS POULTRY FOR SALE.**—Three hundred fine birds. L. Brahmas, Buff and Partridge Cochins, B. Langshans, B. P. Rocks and S.C.B. Leghorns. Prices from \$1 up, according to score. Adam Hankin, Olathe, Kas.

**FOR SALE.**—One Jersey registered bull, grand individual, \$50. One Jackson grade level, cost \$25, \$15 buys it. One Mann's bone-cutter, cost \$20, for \$10. One 200-egg Reliable incubator and brooder for \$12.50. A \$22 first-class camera for \$12.50. Pure-bred B. P. Rock hens and pullets \$5 per dozen; cockerels \$1 to \$2.50 each, as well bred as any in the West. Seventeen elegant Light Brahmas (some score as high as 94½ by Hewes), the seventeen for \$20. Henry E. Peers, Marion, Kas.

**FOR RENT.**—Two farms of 960 acres each in Anderson county to rent for a term of five years to good, responsible parties. All good farm land. Price \$1,200 per year. National Brokerage Company, 503-504 New York Life Building, Kansas City, Mo.

**FOR SALE CHEAP.**—Three choice Wilkes-bred gilts bred for February farrow. Also two top males, same breeding, summer farrow. John Howat, Haven, Kas.

**FOR SALE.**—Very fine Black Langshan cockerels. Also Choice Rose-combed Brown Leghorn cockerels. Bargains. W. V. Church, Marion, Kas.

**FOR SALE.**—Exchange or to buy, pure-bred White Holland tom turkeys. Also for sale Light Brahma cockerels. E. N. Woodbury, Cawker City, Kas.

**WANTED.**—To purchase, twenty pure-bred Holstein-Friesian cows and heifers. Price must be low to secure sale. Address "H," care KANSAS FARMER office, Topeka.

**SUNFLOWER HERD DUROC-JERSEY SWINE.**—Choice pure-bred pigs for sale, September farrow. Address A. D. & H. L. Perrin, Prescott, Kas.

**FOR SHORT-HORN BULLS.**—Reds and roans, first-class, and Poland-China boars, address D. P. Norton, Council Grove, Kas.

**JOHN HOWAT, BREEDER OF THOROUGHbred** Poland-China hogs of the choicest strains. Haven, Kas.

**BARRED PLYMOUTH ROCKS AND MAMMOTH** Bronze turkeys, cheap for one month. Also an Ohio Improved Chester boar. D. Trott, Abilene, Kas.

**MOESER ICE AND COLD STORAGE CO.**—Topeka, have just completed their new cold storage building, on the latest modern plan, and now have the best facilities for storing all kinds of fruits, butter, eggs, etc. Railroad switch to storage building. Car-load lots unloaded free of charge. Write for prices.

**FOR SALE.**—One hundred and sixty acre farm one and a half miles from Bushong station, Lyon county, Kansas. Good spring. Price \$8 per acre. J. B. McAfee, Topeka, Kas.

**WE MAKE A GOOD FARMER'S SPRING WAGON.**—two lazy backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

**WANTED.**—Buyers for Large English Berkshires gilts, bred or ready to breed to son of imported boar. Bargains! O. P. Updegraff, North Topeka, Kas.

**SHAWNEE COUNTY CIDER MILL.**—Bring your apples to my cider mill, three miles west of Kansas Ave., on Sixth street road. My mill will be in operation every Tuesday, Thursday and Saturday till November. Henry McAfee Topeka.

**WANTED.**—Buyers for Large English Berkshires and improved types of Poland-Chinas, from prize-winners, at farmers' prices. Riverside Stock Farm, North Topeka, Kas.

**FOR SALE AT SPECIAL PRICES.**—Hay outfits, carriers, forks, etc. Inquire at the store of F. W. Griggs & Co., 208 W. Sixth St., Topeka, Kas.

**SHORT-HORN BULLS.**—Cruckshank-topped, for sale. Choice animals of splendid breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

**FOR SALE.**—Farms in Morris, Osage, Lyon, Bourbon, Cherokee, Labette, Neosho, Anderson, Montgomery, Coffey, Woodson and many other counties for sale on eight years' time. No interest asked or added in. Write for new circulars with descriptions and prices. Hal W. Nelswanger & Co Topeka, Kas.

**FOR SALE.**—One hundred high-grade Shropshire ewes, choice ones. Also some choice high-grade Jersey cows. E. W. Melville, Eudora, Kas.

## SPECIAL WANT COLUMN--CONTINUED.

**ALFALFA SEED.**—Crop of 1896. Pure and fresh. Write for prices. McBeth & Kinnison, Garden City, Kas.

**EGGS FOR HATCHING.**—See advertisement else where. Belmont Stock Farm.

**WANTED.**—Sale bills, horse bills, catalogues and other printing. A specialty at the Mail job printing rooms, 900 North Kansas Ave., North Topeka.

**THOROUGHbred POLAND-CHINAS.**—For sale twenty young males, Black U. S. Corwin, Wilkes and King Butler strains. Wm. Maguire, Haven, Kas.

**WHITE PLYMOUTH ROCK COCKERELS UNTIL** surplus stock is disposed of, at 50 cents, 75 cents and \$1. All are good, healthy stock, well bred of sufficient age for spring use. Less than \$1 order, coops 25 cents. E. K. Terry, Sunny Slope Poultry Yards, Burlingame, Kas.

## DO YOU WANT TO MAKE MONEY? —THEN BUY— CRIPPLE CREEK STOCKS

NOW! and take advantage of coming advance in prices.

### Bull Hill Gold Tunnel Stock

we are recommending, and have a limited amount of TREASURY stock, full paid and non-assessable, that we can sell at 3 cents a share.

This Tunnel site runs under the famous Bull Hill and cuts many valuable veins. Eight hundred feet of work already done. Prospectus, map, etc., furnished if desired. Send orders to

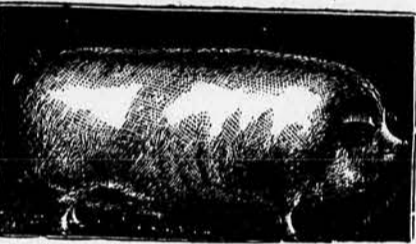
THE MECHEM INVESTMENT CO.,  
Colorado Springs, Colo.

## DISPERSION PUBLIC SALE!

OF FORTY HEAD

Improved Chester Whites  
and Poland-China Hogs,

ON TUESDAY, DECEMBER 8, 1896.



Consisting of 8 choice boars ready for service, 7 choice tried brood sows, 10 choicespring gilts, 12 very fine early fall pigs. These sows are all bred to farrow early, by Ben Buster Jr. 7431, he by Ben Buster 6189 and White Lady 9168. The gilts are bred to Free Coinage 7339, he by Free Silver and Daisy, bred by W. S. Attebury, of Rossville, Kas. Our brood sows originated from the noted herds of L. B. Silver, of Ohio, and W. W. Seeley, of Illinois. There are a number of show pigs in this offering. Breeders, avail yourselves of this opportunity. Come or send in your bids to our address or to auctioneer. Will also offer the Poland-China boar, Chief of Louisville, bred by Manhattan Agricultural college farm, who has proved himself a noted breeder (will have his record number on day of sale), he by Smith's Choice 30443 by Kaw Chief 2865 and College Beauty 19423, and two very fine September boar pigs by Chief of Louisville and out of Fine Quality; one spring boar by Baron Wilkes 33771, dam Black Belle, close blood relation to the \$1,000 hog, King Perfection. These hogs are in fine, healthy breeding condition. No cholera around.

**Terms of sale:**—A credit of five months will be given on approved notes, with interest at 8 per cent; 2 per cent. off for cash.

Breeders from a distance who notify us will be met at train and entertained free.

Howard Johnston, Auctioneer. Jas. St. John, Clerk.  
C. J. HUGGINS and E. T. FROWE, Breeders.  
Remember date, Tuesday, December 8, at farm, one and a half miles north of WAMEGO, Pottawatomie Co., Kas., at 1 o'clock p. m.

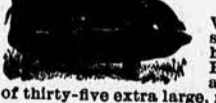
J. G. Peppard

1400-2 Union Avenue,  
KANSAS CITY, MO.

MILLET  
CANE  
CLOVERS  
TIMOTHY  
GRASS SEEDS.

SEEDS

## R. S. COOK, WICHITA, KAS., Poland-China Swine



• • BREEDER OF • •  
The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The Banner Boy 28441, Black Joe 28663, World Beater and King Hadley. For sale an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly bred sows. Inspection or correspondence invited.

## ELM BEACH FARM POLAND-CHINA SWINE



The home of the great breeding boar, SIR CHARLES CORWIN 33095. Our 1896 crop of pigs are by six different boars and out of fashionably bred sows, including such grand individuals as the prize-winning \$500 Lady Longfellow 34089 (S.), that has eight pigs by the prize boar, King Hadley. STOCK FOR SALE at all times and at very reasonable prices. We also breed Short-horn cattle. Write or come and see us.

IRWIN & DUNCAN, Wichita, Sedgwick Co., Kas.

## PUBLIC SALE POLAND-CHINAS AT ROSE CREEK FARM

(Farm in Republic Co., Kas., near Nebraska State line.)

Chester, Nebraska, on Monday, December 21, 1896.

**FORTY-FIVE HEAD**, including five mature sows, twenty spring boars and twenty gilts. The sows and about half the gilts will be bred and safe in pig. The greater part of the offering is the get of our herd boar, Kodak 15088, a grandson of Guy Wilkes 2d on one side and of Van Dee on the other. Kodak's daughters will be bred to Tecumseh the Great 16900 (by Chief Tecumseh 2d) and Domino 16734 (first-prize boar at Omaha, 1896). Send for catalogue.

COL. F. M. WOODS, Auctioneer. JOHN P. TOLFOED, Manager.

COME AND INSPECT OUR HERD OF JERSEY CATTLE.

## PUBLIC SALE OF SHORT-HORN CATTLE!

AT BUNCETON, COOPER CO., MO., DECEMBER 10, 1896.

30 BULLS—20 HEIFERS—MAINLY YEARLINGS.

A choice selection from my herd of over one hundred and fifty head of high-class Short-horns, containing Cruickshanks, Butterflies, Victorias, Aconites, Wood Violets, Scotch-topped Young Marys, Young Philis and other standard families, sired principally by Ambassador 110811, Col. Aberdeen 79302 and Brit and about all the yearling heifers. I wish to call special attention to the nicely-bred Scotch yearling, Golden Knight, by the great Godoy 115675 and out of Golden Violet; the robust Silverheel by Col. Aberdeen 79302; the thick, stylish Orange Duke by Col. Aberdeen; the red, massive Howard by Red Buttery Byron 158513 and out of Philis; a massive 1,700-pound cow, Lady Goodness by Golden Prince 115698, and Angelica 2d by the old premier bull, Britisher 106627. You will not be disappointed when you see the stock.

Send for catalogue to  
COL. J. W. JUDY, Auctioneer. W. P. HARNED, Bunceton, Mo.

## GREAT COMBINATION SALE

## BERKSHIRE HOGS!

The Best of Breeding and Quality.

Berkshire breeders who wish to introduce into their herds the popular strains of blood to be found in the great prize-winners at the leading State Fairs of 1896, are invited to attend the

## Missouri Breeders' Sale

SEDALIA, MO., DECEMBER 9, 1896.

Sale will be held in MENEFF'S STABLE, East Main street, near central part of the city of Sedalia.

The tops of the following well-known herds have been placed in this sale, viz.: N. H. GENTRY, Sedalia, Mo.; HARRIS & McMAHAN, Lamine, Mo.; JUNE K. KING, Marshall, Mo.; W. N. BRISKY, Independence, Mo.; JAMES HOUK, Hartwell, Mo. All of the stock offered is registered in the Record of the American Berkshire Association.

For catalogue or other information, address either of the parties named above, or

Auctioneer, JAMES W. SPARKS, Marshall, Mo.

## Men's Mackintosh

Double texture, outside English wide wale diagonal pattern, inside a neat plaid with pure gum rubber between, sewed seams, large military detachable cape, black or dark navy blue, 52 inches long; sizes 36 to 48. Our price \$2.75. LADIES' Double Texture Mackintosh, two full sweep, seamless capes, 17 and 27 inches, velvet collar; length 54 to 62 inches. Our price \$4. Send for samples. Sent Free. Our Mammoth Catalogue, quoting everything, on receipt of 10 cents to pay postage. H. R. EAGLE & CO., 68 and 70 Wabash Ave., Chicago, Ill.

## BEFORE BUYING A NEW HARNESS

Send your address with 3c stamp for illus. Catalogue, giving full description of Single and Double Custom Hand-Made Oak Leather Harness. Sold direct to consumer, at wholesale prices. King Harness Co., No. 57 Church St., New York, N. Y.

## "Eli" Baling Presses

33 Styles & Sizes for Horse and Steam Power

48 Inch Feed Opening

Power Leverage 64 to 1

Send for 64 page illustrated catalogue.

COLLINS PLOW CO., 1120 Hampshire St., Quincy, Ill.

KANSAS CITY PLOW CO.,

Gen. Southwestern Agts., Kansas City, Mo.

## SUNNY SLOPE FARM

••••• EMPORIA, KANSAS, •••••

## Hereford Cattle Headquarters



WILD TOM 51592.

Sweepstakes bull Wild Tom 51592. Weight when thirty-four months old 2,205 pounds in show condition. He is the best living son of Beau Real 11055. Dam Wild Mary 21238. Winnings:—Iowa State Fair, 1896, first in class, first in special, first in sweepstakes, and Silver Medal; Kansas State Fair, first in class, first and special at head of herd, first bull and four of his get.

FARM—Two and a half miles northwest of city. We furnish transportation to and from the farm if notified.

Sunny Slope Farm is one of the largest breeding establishments in the United States. Three sweepstakes bulls in service—Wild Tom 51592, Climax 60942, Archibald VI. 60921, also the great breeding bull, Archibald V. 54433, who was the sire of two sweepstakes animals (Archibald VI., sweepstakes under one year of age, and Miss Wellington 5th, sweepstakes heifer over all beef breeds when twelve months old. We also have forty bulls for sale, ranging from eight to twenty months old. We combine the blood of Anxiety, Lord Wilton and Grove 3d. Breeders are invited to inspect our herd.

C. S. CROSS,

H. L. LEIBFRIED, Manager.

EMPORIA, KANSAS.