

KANSAS FARMER

ESTABLISHED IN 1863.
VOL. XXXVI. NO. 34.

TOPEKA, KANSAS, THURSDAY, AUGUST 25, 1898.

SIXTEEN TO TWENTY
PAGES—\$1.00 A YEAR.

BREEDERS' DIRECTORY.

Cards will be inserted in the Breeder's Directory as follows: Four line card one year, \$16.00; six lines, \$23.00; ten lines, \$30.00; each additional line \$3.00. 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, and POLAND-CHINA HOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kas.

CATTLE.

DOCK HILL HERD OF SHORT-HORNS—Straight and cross-bred Scotch and Bates; good as the best. A No. 1, all red, 19 months old bull \$150. J. F. True, Newman, Kas.

FAIRVIEW STOCK FARM—Registered Short-horn cattle. Royal Bates 2d No. 12444 at head of herd. Young stock for sale. E. H. Littlefield, Newkirk, Oklahoma.

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

NEOSHO VALLEY HERD OF SHORT-HORNS. Imported Lord Lieutenant 120019 at head of herd. Young bulls and heifers for sale. Address D. P. Norton, Council Grove, Kas.

SWINE.

D. TROTT, ABILENE, KAS., famous Duroc and Poland-China hogs. C. S. Snodgrass, Galt, Rice county, Kansas, breeds the best. Stock for sale now. Come or write.

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.

KAW VALLEY HERD POLAND-CHINAS—One of the best sons of Chief I Know at the head. Pairs and trios not skin; of all the leading strains. M. F. Tatman, Rossville, Kas.

S. F. GLASS, Marion, Kas., breeder of thoroughbred Jersey cattle, Poland-China and Large English Berkshire hogs, M. B. turkeys, B. P. Roekin and S. C. White Leghorn chickens, peacocks, Pekin ducks and Italian bees.

KANSAS HERD OF POLAND-CHINA SWINE. Has five choice yearling sows bred to my black U. S. boar, and one Tecumseh boar and thirty-five fall pigs by Model Sanders (20492) by Klever's Model. They have typical ears and show fine markings. Address F. P. Maguire, Haven, Kas.

POULTRY.

EXCELSIOR POULTRY AND FRUIT FARM
TOPEKA, : : KANSAS.

We are now well established in our new location, with plenty of free range, and the finest lot of young chicks we ever had. Stock growing finely, and will be ready to offer October 1, 1898. Write your wants and I will quote prices. A full line of Poultry Supplies.

PURE-BRED POULTRY.
Barred P. Rocks, White P. Rocks, Partridge Cochins, White Cochins, Light Brahmas, S. L. Wyandottes, White Wyandottes, Black Javas, Brown Leghorns, White Leghorns, Buff Leghorns, Silver Spangled Hamburgs, Pearl Guineas and Pekin Ducks. Two hundred this year's breeders for sale. Also 500 Spring Chicks, ready to ship after the first of July. Prices lower than any other time of the year. Circular free.

ROCKS WHITE and BLUE BARRED
Empire, Lash and Conger Strains.
Eight years experience in breeding Rocks exclusively. Have the best young stock this year I have ever raised. Perfect, high-sounding, prize-winning birds. Two hundred pullets and cockerels now ready for shipment. A few cockerels from E. B. Thompson eggs for sale. Write for descriptive circular and prices. Printed recipe for making and using Liquid Lice Killer, 25c. Address
T. E. LEFTWICH, Larned, Kas.

SWINE.

M. H. ALBERTY, Breeder of Registered **CHEROKEE, KAS. DUROC-JERSEY SWINE.** Baby Pig Teeth Clippers, 35 cents by mail.

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.

SWINE.

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

V. B. HOWEY, TOPEKA, KAS.
Breeder and shipper of thoroughbred Poland-China and Large English Berkshire swine and Silver-Laced Wyandotte chickens.

THE SEDGWICK NURSERY CO.,
Sedgwick, Harvey Co., Kas.,
—Breeders of—
Short-horn Cattle and Poland-China Swine
Of the Best Strains.
Stock for sale. Correspondence and inspection invited.

"HIGHLAND POLAND-CHINAS."
Twenty-five very fancy fall boars, some of which will do to head any herd or to go in any show ring. Sired by Knox All Wilkes 18179 S. and Highland Chief 18334 S. by Chief Tecumseh 2d 9115. No better sires in any herd. Our prices very low if taken at once. One hundred fine spring pigs by same sires.
Plymouth Rock Eggs.
DIETRICH & SPAULDING, Richmond, Kas.

HEADQUARTERS FOR POLAND-CHINAS
IN KANSAS IS AT SHADY BROOK
STOCK FARM,
H. W. CHENEY, Prop., NORTH TOPEKA, KAS.
Cheney's Chief I Know 18513 (S) at head. All popular strains represented in matrons. Write for prices, which are always reasonable. Buyers met at train and shown stock free.

Wamego Herd Imp. Chester Whites and Poland-Chinas.
Mated for best results.
Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER.
C. J. HUGGINS, Proprietor, Wamego, Kas.

VERDIGRIS VALLEY HERD PEDIGREED POLAND-CHINAS.
Two hundred head, four herd boars, 150 spring pigs. An extra lot of September boars and gilts for sale. Prices reasonable. Farmers and Stock Hog Raisers cordially invited to write or visit us.
WAIT & EAST,
Altoona, Wilson Co., Kas.

SIXTEEN TO ONE HERD
REGISTERED POLAND-CHINA SWINE.
Herd boars, Gold Standard Wilkes by Guy Wilkes 2d 1777 S. and Ideal Quality by Darkness Quality 2d 14861 S. Brood sows, Tecumseh, Black U. S. and Wilkes. Thirty spring pigs, both sexes, ready to go. Farm two miles north of Welda.
J. M. COLLINS, Welda, Anderson Co., Kas.

PURE-BRED POLAND-CHINAS.
Spring crop of pigs by Wren's Model, What's Wanted Wilkes and Tanner by Hidesretcher. Dams by Black Corwin, Wren's Medium, Protection Boy, Moss Wilkes Tecumseh, Hadley M. Washington. Get a Corwin Sensation, Darkness Int. or Moss Wilkes Maid boar before my sale this fall. Some extra fine gilts for sale now. Fanner pigs are marked perfectly and have fine finish. Write me for particulars.
J. R. WILLSON, Marion, Kas.

HIGHLAND FARM HERD PEDIGREED POLAND-CHINAS.
One hundred head. Bred sows in pig to herd boars, Corwin I Know 18448 S., he by the great Chief I Know 19992 S., and others to Hadley U. S., a son of the great Hadley, Jr. 13314 S. Also ten extra choice fall boars and twelve gilts for sale at reasonable prices, breeding and quality considered. Fifty spring pigs by seven different noted sires. Write or visit the farm. John Bollin, Kickapoo, Leavenworth Co., Kas.

PLEASANT VALLEY HERD
REGISTERED POLAND-CHINA SWINE
King Perfection 4th 18744 S. at head of herd, assisted by Tecumseh Wilkes 12894 S. and Lambing Ideal 14050 S. The sire of last named is Gov. C. by Black U. S. We have added several very finely bred sows to our herd. Write for particulars. Address either
W. E. JOHNSON, E. A. BRICKER,
Colony, Kas. Westphalia, Kas.

M. C. VANSELL,
Muscatoh, Atchison, County, Kansas,
Breeder of Pure-bred Poland-China Swine and Short-horn Cattle of the most desirable strains.
For Ready Sale Thirty Poland-China Bred Sows
One and two years old, bred for fall farrow; very choice; price low if ordered soon; must make room for 170 pigs now on hand. Come and see or write.

SWINE.

D. L. BUTTON, North Topeka, Kas., breeder of Improved Chester Whites.
Stock for sale. Farm 2 miles northwest of Reform School

DIVERDALE HERD OF Improved Chester White swine and Light Brahma poultry. J. T. LAWTON, BURBANK, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

Standard Herd of Poland-Chinas
A choice lot of gilts sired by Ideal U. S. and bred to Tecumseh Chief. Also some good Tecumseh Chief gilts bred to Look Over Me (he by old Look Me Over) and some good fall pigs, both sexes. Write and get my prices or come and see.
WM. MAGUIRE, Haven, Kas.

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, Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also bred Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.
Allen Thomas, Blue Mound, Linn Co., Kas.

Nation's Poland-Chinas.
Fifty boars and gilts for this season's trade. My herd boars consist of Darkness Quality 14361, Princeton Chief 14543, Col. Hidesretcher 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited.
LAWRENCE NATION, Hutchinson, Kas.

SUNFLOWER HERD OF SHORT-HORN CATTLE and POLAND-CHINA SWINE.
125 head in herd, with Sir Knight 124403 at the head. Females are by such imported Crulckshank bulls as Craven Knight 96923, Thistle-top, Master of the Rolls, Earl of Gloster 74523, Viscount Richmond, Knight Templar 66658, etc. Forty very choice brood sows. Young stock for sale.
ANDREW PRINGLE Harveyville, Kas.

POLAND-CHINAS.
Guy Darkness 18292 and Best Nims 19612, herd boars. Sept. '97 boars and gilts for sale. Guy Darkness gilts will be bred to Best Nims for fall farrow.
Correspondence or inspection of herd solicited.
S. W. HILL, Hutchinson, Kas.

ROSE CREEK FARM READ THIS SPECIAL OFFER:
Will sell February and March pigs during August for \$16 each, delivered at any railroad station in Kansas or Nebraska. They will weigh 150 pounds.
H. WOODFORD, Mgr., Chester, Neb.

Mains' Herd Poland-Chinas
Headed by the two grand sires, One Price Chief 20114, he by Chief Tecumseh 2d 9115, out of Alpha Price, she by One Price 4207; Model Combination 19853, grandson of Klever's Model, on sire's side, and of Chief Tecumseh 2d on dam's side. I have pigs from other noted boars mated to a selected lot of sows as good as are known to the breed. A very fine lot of fall and spring pigs and quite an extra lot of bred sows of different ages. I will give very reasonable prices on all stock. Satisfaction guaranteed.
James Mains, Oskaloosa, Jefferson Co., Kas.

E. E. AXLINE, Oak Grove, Mo.
POLAND-CHINAS.
Most Fashionable Strains.
MODEL BOY, WESTERN WILKES, Now in Service.
YOUNG STOCK FOR SALE.

SWINE.

SUNNYSIDE HERD PEDIGREED POLAND-CHINAS.
Herd Boars are Grand Sons of J. H. SANDERS and SHORT FROP, the World's Fair Prize Winners. Bred to 20 large mature sows of Corwin Black U. S. and Black Bess blood. We aim to produce the money-makers, not sacrificing size and feeding qualities to fancy points. Choice young stock for sale at reasonable prices.
M. L. SOMERS, Altoona, Kas.

THE WILKES QUALITY HERD OF POLAND-CHINA SWINE.
Thos. Symms, Prop., Hutchinson, Kas.
Herd boars, Darkness Quality and Guy Wilkes. For ready sale 45 very choice pigs out of Bessie Wilkes, Beauty Sedom, Chief I Know, Standard Wilkes, Ideal Black U. S. and Chief Tecumseh 2d sows.

F. L. and O. R. OARD, Proprietors,
HEDGEWOOD HERD OF POLAND-CHINAS
VASSAR, KANSAS.
Popular Blood. Individual Merit.
Brood sows of the most popular strains and individual merit. The best that money can buy and experience can breed. Farm one and one-half miles south and half mile east of Vassar, Kas., on Missouri Pacific railroad.

SHEEP.
SEVENTY-FIVE HEAD OF SHEEP FOR SALE.
Pure-bred Cotswold and American Merinos. This includes our tops and show sheep; must be sold by October 1; rams and ewes, all five years old and under. Write at once to Hague & Son, Box 140, Walton, Harvey Co., Kas.

SHROPSHIRE, THE BEST FARMERS' SHEEP.
For sale, a few very fine early and large ram lambs from eligible to registry sires and high-grade ewes. Write for description and reasonable prices to L. A. Seely, Lyons, Kas.

SHROPSHIRE RAMS.
A splendid lot of yearling and spring lambs at low prices. Write your wants, or better, come and select.
Two extra fine Cotswold buck lambs.
Address,
J. C. STONE, JR.,
Leavenworth, Kas.

CATTLE.
SILVER CREEK HERD SHORT-HORN CATTLE.
Scotch and Scotch-topped, with the richly-bred Champion's Best 114671 in service. Also high-class DUROC-JERSEY SWINE. Can ship on Santa Fe, Frisco and Missouri Pacific railroads.
J. F. STODDER, Burden, Cowley Co., Kas.

CLOVER CLIFF FARM.
Registered Galloway Cattle. Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbo, and the saddle stallion, Rosewood, a 16-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address
BLACKSHERE BROS., Emdale, Chase Co., Kas.

DEER PARK FARM.
H. E. BALL, Proprietor.
Registered Jersey cattle. Young bulls and heifers for sale.
Registered Poland-China swine. Young boars for sale.
Farm two miles east of Topeka on Sixth street road.
T. P. CRAWFORD, Mgr., Topeka, Kas.

SUNRISE STOCK FARM.
C. A. STANNARD, Prop., Hope, Kas.
Breeder of Hereford Cattle and Large English Berkshire Hogs.
Bulls in service: Kodax of Rockland 40731, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 8 to 7 years old for sale.

Agricultural Matters.

HUNTER AFTER THE 'HOPPER.

The festive hopper has a persistent enemy in Prof. S. J. Hunter, of the State University. Last year Prof. Hunter investigated this rascal and made a report, which was published in the Kansas Farmer.

By request, Prof. Hunter returned early this season to continue his investigation. He has been at work for the past month, assisted by Geo. W. Watson, of Kinsley, and others, in Edwards, Ford, Finney and Hamilton counties. He went with tent, full laboratory equipment and everything necessary to make his mission complete. He lives in the alfalfa fields and is fully conversant with every phase of grasshopper life.

NATIVES.

Prof. Hunter says damage by grasshoppers is almost wholly due to one species, commonly called "the yellow grasshopper," and known to scientists as *Melanoplus differentialis*. It is easily recognized by its size—being one and a half to one and three-quarters inches in length—its bright yellow body and dull colored wings. It is a native species and, contrary to the general rule, seems to thrive with the advance of civilization. It is not migratory, and lives and dies near its birthplace. The female grasshopper buries its eggs, 100 to 150, in a hole about three-fourths of an inch below the surface of the ground. The young hoppers came out early the next spring in search of food. They are wingless until about the middle of July, when they grow wings that enable them to move, when disturbed, in a low, heavy flight. If food is not immediately at hand for the young hoppers many die, but alfalfa, sending forth shoots with earliest signs of spring, usually gives the needed nourishment and strength for further hopping and further eating. Alfalfa, by its rank growth, shades out crab-grass and trash weeds, leaving open spaces around and among the plants, a very favorable place for egg-laying, so when the young hopper appears on the world's surface he finds a juicy breakfast awaiting him.

Prof. Hunter states that wherever large areas are sown in alfalfa the native grasshopper will make its appearance and will have to be given serious attention.

DISKING.

It is with these ideas clearly set before the farmers that Prof. Hunter has been trying to solve the problem. When in the field last fall he strongly urged disking and cross disking the alfalfa after frost and before spring growth. This, he assured the farmers, would increase the next yield of alfalfa and destroy the numberless eggs by turning them out of their hiding places to become easy prey to birds, insects and the weather.

He also urged the protection of growing crops from the entrance of hoppers hatched on adjacent land by going around the edges of the field once a week with a "hopper-dozer." Hoppers do not enter at all sides, but at places easily recognized by presence of the insects upon the plants.

Some alfalfa-growers were fearful that the disc harrow would permanently injure the alfalfa plants. Upon Prof. Hunter's recommendation a disc harrow was run over 160 acres of alfalfa in both the north and south ranches of Ball & Godard, of Topeka, last winter, as an experiment. The results upon these two quarters were more than expected, the yield being fully one-third greater than the average. While two adjacent quarters of alfalfa not harrowed were almost totally stripped by the hoppers, no insects appeared in the disked quarter until cutting time. Upon the upper ranch the whole quarter was not harrowed and the line was easily seen during the season's growth, the disked alfalfa being, as one man stated, like ground that had received a top-dressing of manure.

Another very strong point in favor of running the disc harrow over alfalfa land is that it clears the ground of native grasses. When alfalfa so treated was cut this year the clean, open stubble was the subject of much favorable comment. The question of native grasses springing up in the alfalfa has caused some fear lest in places the native sod might return and crowd out the cultivated plant. "Here," says Prof. Hunter, "you have three birds with one stone. By vigorous use of the disc harrow you destroy the grasshopper eggs, clear the ground of native grasses and very materially increase the crop."

Mr. Smart states that he will disc 1,200 acres of alfalfa ground this fall and other farmers in this region are

making preparations to work their fields in the same manner. The harrowing, too, comes at a season when the farmer has no urgent demand upon his time.

Prof. Hunter has driven over Edwards, Ford, Finney and Hamilton counties and failed to find grasshoppers present in any number except in the immediate vicinity of alfalfa fields, and there is no movement except where alfalfa is being cut. In these fields the hoppers move into adjacent crops. To stop their advance, as well as to destroy the insects, thus preventing the laying of eggs for next season's brood, the farmers are using a machine exterminator, made after the Professor's directions, which is almost identical with those issued several years ago by Prof. C. V. Riley. The machine is very simple, being two galvanized iron pans, eight feet long, four inches in depth in front and eight inches behind, placed side by side on three runners six feet long and eight inches high. Sheets of stovepipe iron are nailed to standards behind, allowing the iron to lap over the pans. Place two inches of water in the pans and add enough coal oil to cover the surface of the water. Move the machine across the end of the field where hoppers are entering. When the hoppers start to fly the machine moves under them, and, striking the sheet-iron barriers, they fall into the pans. Many hop out again, but the result is the same whether they stay in the pan or hop out, for the touch of coal oil seems to bring death. The oil and water does not affect the vegetation passed over.

SPRAYING.

When corn is too high to use such a machine, spraying the first eight or ten rows with a mixture of one pound Paris green, one pound lime and sixty gallons of water will exterminate hoppers. While this will not reach the corn in the ear, it may be advisable not to pasture these stalks. Further west farmers are spraying their orchards in this manner.

Agricultural Science.

The nineteenth annual meeting of the Society for the Promotion of Agricultural Science met at Boston, Mass., last week. The program herewith presented shows something of the trend of thought in this branch of science.

PROGRAM.

- B. D. Halsted, Presidential address, "The Society's Progress."
- E. W. Hilgard, "Some Physical and Chemical Peculiarities of Arid Soils."
- Clara Cunningham (by invitation), "Bacterial Disease of the Sugar Beet."
- J. B. Smith, "Quarantine Against Foreign Insects. How Far Can it be Effective?"
- W. W. Rowlee, "The Effect of Electric Light Upon the Tissues of Leaves."
- W. J. Beal, "The Composition and Comparative Value of Lawn Grass Mixtures as Purchased in the Markets."
- C. D. Smith (by invitation), "Movements of the Food and Ash Elements in the Maturing Corn Plant."
- B. M. Duggar, "Shot Hole Effect of Peaches and Plums."
- S. A. Beach, "Notes on Self-fertility of Cultivated Grapes."
- L. F. Kinney (by invitation), "Plant Individualism."
- C. S. Plumb, "Biographical Sketch of E. Lewis Sturtevant."
- H. Osborn, "Problems Connected with the Attacks of Jassidae on Grasses."
- A. D. Hopkins, "Some Notes on Progress in the Study of Varieties of Timothy."
- C. E. Bessey, "The Influence of Fungi in the West."
- J. B. Lindsey (by invitation), "Concentrated Cattle Foods and Laws for Their Control."
- W. J. Beal, "A Few Points Demonstrated for Our Locality in Growing Forest Trees for Twenty-two Years."
- W. R. Lazenby, "Judging or Scoring Fruits."
- C. S. Phelps (by invitation), "The Effect of Nitrogenous Fertilizers Upon the Percentage of Protein in Grasses and Legumes."
- L. H. Pammel, "Some Results on the Germination of Cereals."
- W. R. Lazenby, "The Dichotomy of Indian Corn."
- A. D. Hopkins, "Insects Detrimental and Destructive to Timber and Timber Products."
- Clarence M. Weed, "The Winter Food of the Chickadee."
- C. S. Plumb, "The Cereals and Their Relation to the Life Zones in North America."

Spend Your Vacation in the Mountains.

But first write the General Passenger Agent of the Colorado Midland railroad, Denver, for maps, views, and descriptive matter, so as to know where to go.

Improving Plants for Profit.

Mention has been made in these columns of the successes which have attended the labors of the Messrs. Garton in originating new and valuable breeds of cereals, grasses, clovers, turnips and other forms of agricultural food plants for England. For eighteen years these scientists have been at work. They have but recently attained remunerative results. Their operations have now grown to such magnitude that a company has been capitalized at £100,000 (nearly \$500,000), which will place on the market seeds of the new varieties. The realization of values in hard cash as the result of scientific work constitutes an argument for such work that is easily understood by even the unscientific.

In its prospectus this company estimates the value of the results. The following are some of the points made:

"The quantity of seed, and number of established new breeds in hand, will enable the company to place on the market annually a succession of constantly improving new breeds of each series—each season's introductions being in advance of the preceding season in regard to cropping, increased vigor, and general stamina—during which time other new breeds will be under process of production and fixation, to take the place of the earlier introductions, and as these will only be procurable through the company, it will find itself in possession of a most valuable and profitable monopoly.

CEREALS—WHEAT, OATS AND BARLEY.

"The new breeds of cereals possess the following advantages over the varieties now generally grown, viz.: (1) A very considerably increased yield per acre (some of the latest new breeds producing grains double the size of the original varieties, and consequently estimated to yield double the weight per acre); (2) increased length and strength of straw; (3) improved quality of grain; (4) early ripening; and (5) freedom from disease.

"The approximate annual requirements for seed of wheat, oats and barley in the United Kingdom amount annually to about 25,000,000 bushels.

"To supply even a small portion of these requirements with the available seed of the new breeds each season to replace the older varieties, should in itself constitute a trade of considerable magnitude controlled exclusively by the company, there being an outlet at highly remunerative prices for all the seed it will be possible for the company to produce.

"The estimated stocks of seed of new breeds of wheat, oats and barley which will be available for sale and delivery next autumn and spring amount collectively to about 100,000 bushels at a cost to the company of about £14,000. The selling price of these should not, it is considered, be less than £30,000, which amount should produce a profit from this source alone more than sufficient to pay the dividend on the preference shares and leave a substantial surplus for the ordinary shares. Based, however, on the prices realized by the sale of the 'Abundance' or 'Garton' oat, it is confidently anticipated that this selling price will be largely exceeded.

"The price at which it is proposed to sell each season's new breeds of wheat, oats and barley will be based upon that obtained for the 'Abundance' or 'Garton' oat, as it is now generally known. This oat was introduced by Messrs. Garton in the spring of 1892, and sold at the unprecedented price of 21s. per bushel, each customer being limited to four bushels. So great was the demand, even at this price and under the restricted conditions, that all the available seed was quickly sold in the immediate district. On offering it again a second season, at the price of 10s. 6d. per bushel, the demand was five times greater, and again exceeded the supply. The third season the price charged was 8s. 6d. per bushel, with a demand seventeen times greater than that of the first season. The average cost of growing the stocks to supply these demands was 2s. 9d. per bushel.

"Messrs. Garton, having thus demonstrated the great commercial possibilities attending the introduction of their new breeds in the near future, have since confined themselves to the further development of the experiments, and the accumulation of stocks of seeds of the new breeds, there being practically no limit to the extension of the system.

"It is estimated, taking the result of the introduction of the 'Abundance' or 'Garton' oat as a basis, that the demand for seed of the new breeds of wheat, oats and barley will, as soon as suffi-

cient stocks are available, amount to at least 160,000 bushels annually, at prices ranging from 5s. to 21s. per bushel. GRASSES, CLOVERS, TURNIPS, ETC.

"To cater for the grass, clover and turnip seed trade, the estimated gross average annual profits on which, in the United Kingdom alone, amount to over £500,000, the company will be in possession of a series of established new breeds of absolute permanency and vigor, not before obtainable, surpassing in every respect the varieties now generally grown. In view of the monopoly the company will thus possess in the control of the seed of these new breeds, the amount of trade and consequent profits resulting therefrom should be considerable, and should show a large increasing trade year by year as the advantages possessed by the new breeds over the varieties at present in cultivation become fully known.

"If 5 per cent. of this trade was secured, a low estimate considering the strong position the company will occupy, the gross profits resulting therefrom should amount to £25,000 annually.

NEW FOOD PRODUCTS.

"In the new breeds of cereals are comprised a series from which new and valuable food elements can be obtained, which it is impossible to obtain from the varieties now generally cultivated. It is not proposed to offer seed of this series for sale, but to grow and retain all the produce therefrom for the purpose of formulating, compounding and manufacturing, as soon as sufficient stocks are available, into new and distinct food products for human consumption, and for which patent rights will be applied for in due course. The Directors consider that from this branch of the business a large and profitable trade will result, the material which the company will possess being such as to enable them to place upon the market new forms of food not obtainable from any other source.

"In view of the valuable monopoly the company will possess in the control of the new breeds and their adaptability either for seed or new forms of food, the Directors feel confident that the company will command a large and lucrative business, the profits from which should be sufficient, after payment of the preference dividend, to pay substantial dividends on the ordinary shares."

What this English company is organizing to do for Great Britain, pocketing monopoly profits, the Kansas State Agricultural College is preparing to do and has entered upon the work for the farmers of this State for the common good. By making use of the improvements already attained by the Englishmen and by profiting from the methods they have worked out, our experimenters will doubtless attain results in less time than was necessary for their English brethren to feel their way.

Tricksters at Agricultural Fairs.

Wherever large numbers of people gather, a class of persons is usually found who make a living by deceiving the public. They have schemes and tricks innumerable that appear to be easy and simple; but in reality they are quite difficult and in some cases impossible to successfully perform. They have wheels and machines that are doctored to turn as the proprietor may wish to make them. They have coconut-headed negro dodgers to arouse the brutality in men and boys. They have tented shows which are disgusting in coarseness and vulgarity.

Among the throngs at agricultural fairs these leeches are out of place. They contribute nothing helpful or good. They do not add to the attraction of the fair. They do not bring desirable patrons. They do not swell the gate receipts.

They are not patronized by intelligent patrons of the fair. They are not wanted by honest farmers. They are shunned with fear by thoughtful parents. Because of their presence, even the fair is not patronized by many of our best citizens' families.

The harm accomplished by these self-invited fakirs would doubtless surprise us, were it possible to gather and trace back to their door all the results of their work. They distract the thought, they divert the attention, they destroy the interest in the real work of the fair. The competitive exhibitions, the meritorious displays, the awarding of prizes are all robbed of the undivided interest that belongs to them, and which the proprietors have labored day and night to develop.

The morals of the country suffer seriously from actions and words that, without warning, are sprung upon inquisitive audiences in the tent shows.

The Stock Interest.

THOROUGH-BRED STOCK SALES.

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

SEPTEMBER 3—Hornaday, Young and Turley, Poland-Chinas, Fort Scott, Kas.
 SEPTEMBER 14—W. H. Wren, Poland-Chinas, Marion, Kas.
 SEPTEMBER 28—Willie Blair, Red Polled cattle and Poland-China hogs, Beulah, Kas.

ARE FATTENING STEERS FED MORE GRAIN THAN IS NECESSARY?

BY PROF. THOS. SHAW.

I do not know of any experiment made in feeding cattle in feed lots or yards on different quantities of corn, with a view to test the difference in profit from feeding moderate, intermediate or forced rations, respectively; the experiments conducted under my supervision were made with grains of various kinds. In no instance was corn the sole grain factor used.

The first of these experiments, conducted in Minnesota, began December 10, 1894, and ended April 28, 1895, thus covering a period of 140 days. Three lots of steers were chosen, with three in each lot. They were tied in stalls, and were fed meal, corn ensilage, and hay. The meal consisted of wheat bran, ground wheat and ground corn in the proportions of one, two and one parts by weight, respectively, and toward the last some oil cake was given. The meal was fed in two feeds per day, and was given along with the ensilage. Of the latter, the aim was to feed each steer twenty-five pounds per day, so far as he would take it, and the hay was given in quantities that would be eaten up cleanly. Now comes the point in the experiment. It was divided into five periods of four weeks each. In period No. 1 the right-hand steer, or No. 1, in each group, was fed five pounds only of meal per day. The left-hand steer in each group, or No. 3, was fed nine pounds of meal each day. And the intermediate steer in each group, or No. 2, was fed seven pounds of meal per day. The groups of steers consisted of Galloway grades, Hereford grades, and Short-horn grades, respectively. The meal was increased one pound per day with each animal in the several lots at the end of each feeding period, that is to say, this was done for four successive periods, after which no further increase was made, except the addition of some oil-cake. The average amount of meal, therefore, fed to the steers in lot 1 was seven pounds per day; to those in lot 2, nine pounds per day, and to those in lot 3, eleven pounds per day.

THE RESULTS.

And now for the results. The three steers in lot 1 consumed 3,666 pounds of hay, 2,772 pounds of meal, 10,269 pounds of ensilage, and 183 pounds of oil-cake, or a total of 16,890 pounds. The steers in lot 2 consumed 3,755½ pounds of hay, 3,612 pounds of meal, 10,500 pounds of ensilage, and 183 pounds of oil-cake, or a total of 18,050½ pounds. The steers in lot 3 consumed 3,080½ pounds of hay, 4,452 pounds of meal, 9,818½ pounds of ensilage, and 183 pounds of oil-cake, or a total of 17,534 pounds. The total increase in weight made during the experiment by the steers in lot 1 was 791½ pounds; by the steers in lot 2, 782 pounds, and by the steers in lot 3, 861 pounds. The cost of the food consumed by the steers in lot 1 was \$43.29; of the steers in lot 2, \$49.75, and of the steers in lot 3, \$53. The average cost of making one pound of gain with the steers in lot 1 was 5.52 cents; with the steers in lot 2, 6.36 cents, and with the steers in lot 3, 6.19 cents. Be it remembered here that food during that winter was expensive. At the close of the experiment the price obtained for the steers in lot 1 was \$45.54 more than the original cost of the steers with the cost of food added; for the steers in lot 2, \$40.83, and for the steers in lot 3, \$38.61. The total profit from the feeding was \$124.98; whereas, had the light-meal ration been fed to all the steers, basing the computation on the weights at the commencement of the experiment, the total profit would have been \$137.96. This, of course, was but one experiment. However, the writer has conducted four experiments in all in the same line. The first was conducted at the Ontario government farm at Guelph, in the winter of 1892-'93. The second is the one the results of which have been given above. The third was conducted at the Minnesota station in the winter of 1895-'96; and the fourth in the winter of 1896-'97. The trend of the results of all these experiments points in the same direction.

The work will be carried on in succeeding experiments. The successful

solving of this problem may mean thousands and tens of thousands of dollars to the feeders of the West. The writer is coming to the conclusion, first, that an animal which is being fattened can only consume a certain quantity of meal with profit; second, that this quantity is far less than is usually fed to cattle that are being fattened in the West; third, the animal will eat much more meal than it can properly digest, and fourth, that all taken in excess of the ability of the animal to digest is, at least, measurably wasted. Notice the small quantity of meal fed to the steers in group 1—only seven pounds per day. Their average weight when the experiment began was 900 pounds, and when it closed 1,164 pounds. Such steers in Western feed lots usually get at least twenty-four pounds of corn per day, and in some instances more than that. Deduct from this five pounds per day for a pig, and there is left nineteen pounds. Add, say, three pounds a day of corn in the ensilage to the ration of the first steer, and we still have a difference of nine pounds per day in the grain consumed by the second steer. True, the average steer in the feed lot may gain more per day under a forcing ration, but he will only do so for a short time. The whole subject of feeding in the West will have to be revised with the advance of food values.

PRESIDENT MORROW'S VIEWS.

President Morrow, of Oklahoma Agricultural College, says: "In general, it has been found most profitable in fattening cattle to give them all the grain they will eat and fairly digest, usually giving nearly or quite all the 'roughness' they will eat. When full-fed on grain cattle will not eat a large quantity of any rough feed, unless they have grown tired of the grain or it is not in good condition. Some experiments in Illinois, under the direction of the writer, indicated that, even on good pasture in summer, cattle would eat little more than half as much grass when full-fed with corn as when the grass was their sole food. It is clearly true that there is some waste when cattle are fed all they will eat of corn, even if hogs follow them, but it is believed this waste is less than that which comes from the longer time required to fatten cattle if not on a full feed of grain. In one case the writer has known of feeding a large number of cattle nothing but corn meal. This seems unwise in any ordinary case. The comparative cost of the two classes of food will largely determine the method of feeding. Thus, at the Oklahoma Experiment Station we have a quantity of good corn fodder, on which there are few ears, owing to dry weather and some hot winds at earing time. Corn will be higher than it was last year. We will feed our young steers more corn fodder and less grain because of this, but the steers designed for market during the winter will receive all the grain they will be able to digest. With corn at 40 cents per bushel and a large quantity of low-priced roughness, it would pay to feed freely of the latter and less of the former, taking a longer time in fattening. Years ago the writer satisfied himself that it did not pay to feed young steers grain when they were on good pasture in Illinois, and that, on the other hand, it was a mistake to drop the grain feed for cattle designed to be marketed fat during the summer, however good the pasturage was."

Value of Skimmed Milk for Young Stock.

The following is from an article on the value of skimmed milk for young stock, written by W. D. Hoard, ex-Governor and a prominent dairyman of Wisconsin:

"In answer to your inquiry as to my ideas of the value of skimmed milk for stock feeding purposes, I will say, as far as my observation goes, coupled with my own experience, not one farmer in a thousand seems to have an adequate understanding of its value. This is shown in three ways:

"First—By their indifference when offered the same at a low price. The other day while in Madison county, New York, I was informed that at the milk station skim-milk was offered at the rate of 10 cents for a forty-quart can, or a fraction less than 12 cents per hundred pounds, and that but few of the farmers would buy it, not believing it was worth even that price for feeding young pigs and calves.

"Second—By the readiness with which they sell their milk to the cities for even a low figure, seemingly taking no account of its feeding value or the loss to them in the fertility of their farms through the losing of the skim-milk.

"Third—By the careless and indifferent way they care for it and feed it, and the lack of understanding of the important fact that if the highest return is

got from it it must be fed to young animals—fed while the pig or calf is in the growing stage. Several years since the Hoard creameries in this city undertook the work of showing its patrons what skim-milk was really worth per 100 pounds when fed even in the crudest and most unscientific manner. Accordingly thirty shoats were bought at the local stock yards, averaging 100 pounds each, for \$4.50 per hundred live weight. These pigs were placed in a yard adjoining the creamery and fed nothing but sweet skim-milk, weighed to them three times a day. They were fed, as I remember, fifty-six days, and sold back to the stock yards at the same price per 100 pounds at which they were bought, and the skim-milk brought 22½ cents per hundred pounds. Much of this value was thus saved by feeding it to the young animals. Had the pigs weighed 200 pounds each, not more than 15 cents a hundred could have been realized. This shows that a part of the scheme consists in knowing at what age and weight of the animal to feed it. The next important principle to consider is that to get the largest return we must not feed it alone, as was done in the foregoing experiment, but in conjunction with some other food. This principle was shown clearly by an experiment of C. P. Goodrich, the veteran dairyman and farmer of this city. Mr. Goodrich, by a series of experiments, found that with shoats weighing 125 pounds a bushel of corn would make ten pounds of pork, and 100 pounds of skim-milk fed alone would make five pounds of pork. By mixing the skim-milk with a bushel of corn ground to meal, or its equivalent in cash value of wheat middlings, the result was eighteen pounds gain, thus showing that there was a gain of three pounds because of the mixing of the two foods. I am convinced that there is a great need of more study and information by the farmers on this subject. The most of them waste a great chance to make good money by bad, unskillful methods in feeding skim-milk. But the foundation of the trouble lies in the fact that they do not understand its true value. I have been an interested observer in the progress of a great many farmers along this and other important lines of dairy knowledge and practice. There is scarcely a farmer in the country but that would resent seriously the imputation that he did not know how to rear calves successfully, nor understand how to handle skim-milk to the best advantage. Would he not say, 'Have I not been brought up with cow and calf rearing all my days?' But let one with a good eye for a calf travel through even the most favored dairy districts, and he will see that not one calf in ten shows that it is being fed and treated as it should be. The calves tell the story. Who cares how or where a man has been reared if his calves show clearly that he does not know how to treat them properly? I do not think that there is any one dairy question, unless it be the breeding of dairy cows, upon which there is so much widespread ignorance and wretched misunderstanding as that of rearing calves. Much of the trouble is because the farmer does not comprehend either the value of skim-milk or how it should be fed.

"The following rules I have always adhered to:

"First, to feed skim-milk. Second, to feed it from three to four times a day. Third, to feed it warm. These three conditions comply as closely as can be (with the exception that the milk is skimmed) to the natural situation where the calf runs with its mother. A half hour address might be given on the reasons which govern each one of the foregoing rules, but I have not the space in which to state them. I am convinced, however, that any one who will follow those rules will find his justification in the improved appearance of his calves."

FREE.—How to keep hogs and poultry healthy and rid them of all diseases. Address, National Stock Remedy Co., Columbus, O.

\$16.10 to Cincinnati and Return.

Tickets on sale September 3, 4 and 5, and for train No. 2 of the 6th, limited to October 2, 1898. Agent Santa Fe Route will reserve berths in sleeper and check baggage through.

Excursion to Boston.

The Nickel Plate road will sell excursion tickets from Chicago to Boston and return for trains September 16, 17 and 18, inclusive, at rate of \$19 for the round trip. Tickets will be valid returning until September 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago.

No More Scrofula

Not a Symptom of the Affliction Since Cured by Hood's.

"When our daughter was two years old she broke out all over her face and head with scrofula sores. Nothing that we did for her seemed to do any good. We became discouraged, but one day saw Hood's Sarsaparilla so highly recommended that we decided to try it. The first bottle helped her, and after taking six bottles her face was smooth and we have not seen any signs of scrofula returning." SILAS VERNOOY, West Park, New York. Get only Hood's because

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier.

Hood's Pills cure nausea, indigestion, biliousness, constipation.

Kansas Fairs in 1898.

Following is a list of fairs to be held in Kansas in 1898, their dates, locations and Secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

- Allen County Agricultural Society—C. H. Wheaton, Secretary, Iola; September 6-9.
- Anderson County Fair Association—C. H. Rice, Secretary, Garnett; August 30-September 2.
- Brown County Fair Association—John H. Meyer, Secretary, Hiawatha; September 6-9.
- Clay County Fair Association—E. E. Hoopes, Secretary, Clay Center; September 14-16.
- Coffey County Fair Association—J. E. Woodford, Secretary, Burlington; September 13-16.
- Eastern Cowley Fair Association—S. C. Day, Secretary, Burden; September 14-16.
- Finney County Agricultural Society—D. A. Mims, Secretary, Garden City; September 13-16.
- Frankfort Fair Association—C. W. Brandenburg, Secretary, Frankfort; September 27-30.
- Franklin County Agricultural Society—Chas. H. Ridgway, Secretary, Ottawa; September 20-25.
- Greeley County Fair Association—I. B. Newman, Secretary, Tribune; October 12-13.
- Jackson County Agricultural and Fair Association—S. B. McGrew, Secretary; Holton, August 29-September 2.
- Jefferson County Agricultural and Mechanical Association—Edwin Snyder, Secretary, Oskaloosa; September 6-9.
- Johnson County Co-operative Fair Association—J. M. Warren, Secretary, Edgerton; September 13-16.
- Kaw Valley Fair Association—W. R. Stubbs, Secretary, Lawrence.
- Marion County Agricultural Society—F. H. Prescott, Secretary, Peabody; September 6-9.
- Miami County Agricultural and Mechanical Fair Association—W. J. Carpenter, Secretary, Paola; September 27-30.
- Montgomery County Agricultural Society—D. W. Kingsley, Secretary, Independence; August 30-September 2.
- Morris County Exposition Company—E. J. Dill, Secretary, Council Grove; September 27-30.
- Neosho County Fair Association—H. Lodge, Secretary, Erie; September 6-9.
- Ness County Fair Association—N. H. Stidger, Secretary, Ness City; September 1-3.
- Osage County Fair Association—W. B. Davis, Secretary, Burlingame; September 6-9.
- Riley County Agricultural Society—Jerome Walbridge, Secretary, Riley; September 6-9.
- Rooks County Fair Association—David B. Smyth, Secretary, Stockton; September 13-16.
- Wichita State Fair Association—H. G. Toler, Secretary, Wichita; September 19-24.
- Osborne County Fair Association—F. P. Wells, Secretary, Osborne; September 20-23.
- Saline County Agricultural, Horticultural and Mechanical Association—H. B. Wallace, Secretary, Salina; October 5-7.

Winter Wheat Growers, looking for a reliable, sure-crop winter wheat, would do well to sow the Bearded Fife or Reliable Minnesota Winter Wheat, grown and offered by the Farmer Seed Company, of Faribault, Minn. Of the large number of letters from those who sowed this wheat for several seasons, we bring two here which show how well it succeeds everywhere.

Lafayette, Ind., July 16, 1894.—Gentlemen: Your wheat (Reliable Minnesota, now known as Bearded Fife) yielded at the rate of 42.9 bushels per acre. The yields of our varieties range all the way from 28 to 45 bushels per acre. You will therefore see that your wheat has made a good record at this station, and the test of the scale brings it up to the front rank, nearly.—W. C. LATTA, Agriculturist, Experiment Station of Indiana.

Warren Co., Mo., March 13, 1897.—Dear Sirs:—The ten bushels of your Bearded Fife Winter Wheat I sowed last fall came through the winter all right and looks fine now, while thirty acres which I sowed with wheat of my own growing all winter-killed, and I will have to plow this under. I wish I had sown more of your winter wheat.—FRED. SHAKE.

Cool and comfortable dining cars on Santa Fe Route are obtained by use of electric fans.

Gossip About Stock.

Read E. E. Axline's "ad." in another column.

A car-load of high-grade and pure-bred Herefords is offered by W. E. Spears, of Richmond, Kas., in another column. Read his description.

J. R. Killough & Sons, Ottawa, Kas., advertise twenty-five pigs by J. R.'s Tecumseh, and some unregistered stock at low prices. See their "ad." in another column.

The Sunflower herd of Short-horns and Poland-Chinas contains some of the best blood in existence. Fifty boars and gilts are offered. Mr. Pringle's advertisement appears on the first page.

The handsome group picture in the Elder Lawn "ad." was sketched from life by our staff artist, and fairly represents the type of females in the herd, owned by T. K. Tomson & Sons, Dover, Kas.

An important sale of Poland-China swine is announced for September 27, 1898, by F. L. & C. R. Oard, of Vassar, Osage county, Kansas. This will be a prime offering by enterprising breeders and of a line of breeding and individual excellence that will open the eyes of the Poland-China fraternity.

Walter Morgan & Son, of Irving, Kas., purchased of C. A. Stannard, last week, a very fine burd calf, to use at the head of their herd, for \$300. He is sired by Sir Rodney of Brookside (47151) out of Lady Wilton (42428), being an intensely strong bred Wilton. Mr. Morgan has been using Anxiety-bred sires for a number of years, and we shall look for

the sweepstakes herd. Then there is another pen of four equally well bred and useful sows, all the get of noted sires, and about a dozen tidy gilts, the get of Corwin Chief I Know. Of the males there are several youngsters of show-yard quality, as well as Darkness Wilkes, all to go under the hammer, wielded by Col. S. A. Sawyer. Train leaves Topeka on Missouri Pacific at 8 a. m.

Mr. J. N. Harshberger, the genial "Colonel," of Lawrence, is booking his fall sales. Mr. Harshberger has only resided in Kansas two years, but during that time has demonstrated his ability as a first-class fine stock salesman. His terms are very reasonable and his efforts have never failed to give satisfaction. He maintains a herd of Poland-Chinas, about thirty head, chiefly of the Look Me Over and Hadley Jr. breeding. He is fitting a choice boar pig (April farrow) for the local fairs.

Beef steers sold at \$5.65 in Kansas City last Friday, the highest price for a full load in three years. Three years ago, to a day, the previous highest price for a full load was paid—\$5.75. It was a load of fancy cattle weighing 1,481 pounds. Six head of fancy Hereford Christmas cattle, belonging to Jas. A. Funkhouser, were sold at \$6 on December 9, 1896, nearly two years ago. The next highest price on that day, however, was \$5. The lucky owner of the bunch at \$5.65 was Charles Bosworth, an extensive feeder and a very successful farmer, of Wellsville, Kas. The load contained twenty-four high-grade Herefords, averaging 1,325 pounds. They

Duchess CXX 28675. The prices realized for these, in common with some of the individuals that composed the show herd, were not as high as some expected to see them go, yet all things considered, especially that many of the offerings were scarcely weanlings, the general average ranks it the best sale so far this season. Fifty-seven head brought \$3,101, making a general average of \$54.40.

Wren's Twelfth Swine Sale, at Marion, Kas., Sept. 14, 1898.

Our readers interested in Poland-Chinas will doubtless be interested in W. H. Wren's twelfth public sale of pedigreed Poland-China swine, which will take place in the city of Marion, the county seat of Marion county, on Wednesday, September 14. His last spring semi-annual sale was the most successful one he ever made—in fact, his sales since the initial one, several years ago, have steadily advanced in prices realized and the offerings have been considered better than the preceding ones. The coming sale will consist of forty-three head—thirty-five sows and gilts, with eight serviceable boars. Fifteen of the sows will have litters at side and others due to farrow later on after the sale. The writer takes it on himself to state that this offering, individually and collectively, is the best, both as to breeding and individual merit, that Mr. Wren has yet sent into a sale ring. Nothing has been spared to remain at home in the herd that would make an attractive offering in the sale ring. The youngsters at side are the kind that all progressive

The Song of the Cradle.



Bye, bye! Hope rises high: There's a sweet little cradle hung up in the sky; A dear little life that is coming to bless: Two soft chubby hands that will pat and caress; A pure little soul winging down from above; A darling to care for, a baby to love.

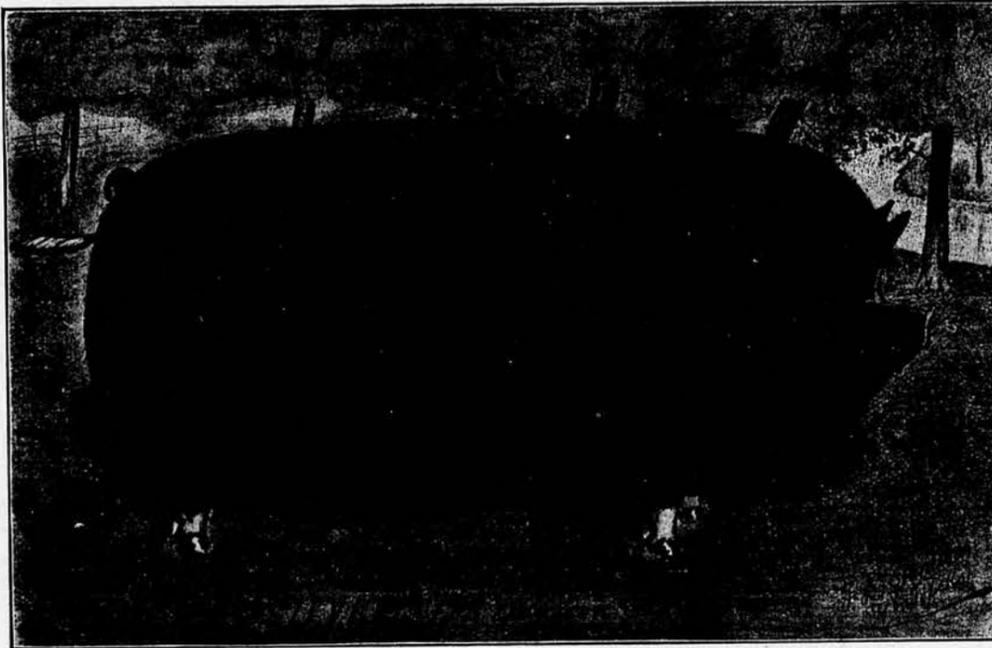
In the days when Eve sinned it was written that motherhood should hereafter be accompanied with pain and sorrow; but this curse upon our fore-parents has been lightened more and more as mankind have learned to rise superior to many of their sins and mistakes.



One of the grandest agencies which enlightened Science has discovered to relieve motherhood from excessive suffering is the "Favorite Prescription" devised by Dr. R. V. Pierce, chief consulting physician of the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y. This wonderful "Prescription" imbues the entire nervous system with natural, healthy vitality; gives elastic vigor to the delicate organism specially concerned in motherhood; renders the prospective mother strong and cheerful and makes the coming of baby entirely free from danger and almost free from pain. The delighted gratitude of Mrs. Pearl Walton, of Alvo, Cass Co., Neb., will find an echo in the heart of every expectant mother:

"Previous to the birth of my child," writes Mrs. Walton, "I had no appetite, was sick at my stomach, had headache, could not rest at night, was completely worn out in every way. I commenced to use Dr. Pierce's Favorite Prescription and began to improve right away. I used two bottles of this great medicine and felt like a new person. At the time of confinement I was in labor but a little while and I owe it all to that great remedy—Dr. Pierce's Favorite Prescription."

Dr. Pierce's Pellets cure constipation.



Property of Geo. W. Berry.—Public Sale of Poland-Chinas and Berkshires, at Berryton, Kas., September 1, 1893.

some good results from the cross. The calf is a grand individual, and should have brought more money, but considering the fact that he will not be a year old until December 6, next, it is a fair sale.

J. F. True, Newman, Kas., owner of the Rock Hill herd of Short-horns, made a recent sale of ten young Short-horn bulls to L. F. Wilson, of Kansas City, Mo., for his Wichita Falls (Texas) ranch. Last year he sold the same party six head, but four died of Texas fever, which he hopes to prevent this season by inoculating against the Texas fever ticks.

Wilson county, Kansas, is the home of some of the finest Poland-China herds in Kansas, and that is equal to saying the finest in the world. Sunny Side herd, owned by M. L. Somers, M. D., of Altoona, contains some of the choicest specimens in Wilson county. The Doctor has made a successful effort during his many years of experience as a swine breeder in building up a herd which he confidently offers to the Poland-China specialists as the finest animals that can be produced.

Geo. W. Berry will hold his public sale of Poland-China swine, September 1, in the picnic ground, a shady grove at Berryton, Kas., affording comfortable accommodations for a large crowd. Among the attractions of this sale is a pair of mature sows sired by old Chief I Know and W. B.'s Tecumseh, respectively. In addition to being a choice pair of show sows, with short, wide, clean heads, great backs, hams and deep sides and best quality of bone, they are tried brood sows, and safe in pig to Darkness Wilkes, winner in classes and herds under a year old at three State fairs, and again as a yearling at the State fair, in class, as a sire and the head of

went to the Armour Packing Company. Mr. Bosworth bought them on the Kansas City market in April, 1897, when they weighed 570 pounds, paying \$4.75 for them. They were grazed last summer and put on full feed October 1. This summer they were on grass and corn meal. He allowed them the pasture in the day time, but brought them to his barn lots at night and gave them corn meal. They gained 755 pounds, Kansas City weights, and sold for 90 cents more than the original cost. At the same time he got the steers Mr. Bosworth bought 104 Hereford heifers from which he has raised 103 calves.

W. B. VanHorn, breeder of Poland-Chinas, at Lawrence, Kas., places a "Special Want" advertisement in this issue that will be of interest to any one who wants a young boar or one or more sows to increase his herd. Two of the boars are by Look Me Up by Look Me Over and two by Tecumseh Short Stop. The females descend from the late Hadley Jr., Look Me Over, McWilkes and other prominent boars. Combination Model 20112, sired by Combination F. F. by Chief Tecumseh 2d, heads the herd. He is well finished, active, stands well on his toes, and is of good weight, with fine color and markings.

The reduction sale of high-class Berkshire swine was held by John R. Gentry at Wood Dale Stock farm, near Sedalia, Mo., and buyers and representative bidders were out from eleven States and Territories. Messrs. Spicer & Groat, of Winchester, Ill., and W. T. Miller, of Bowling Green, Ky., tied on topping the sale on catalogue Nos. 17 and 18 respectively at \$166 each. These two animals were the boars Baron Duke VII 48206 and Baron Duke XIII 48207, sired by Baron Lee IV 33446 and out of

breeders hope to have, and they, with a highly-bred dam, present an opportunity for the prospective buyer to secure just about what he wants. The best way to get the breeding of the offerings is to write to Mr. Wren for a free copy of the sale catalogue, that gives full and complete information concerning the sale and the different animals that will go in the sale.

The Coming Sale of Poland-Chinas at Fort Scott, September 6.

No swine breeder, however high his ambition, need hesitate, if he be a prospective buyer, in attending the sale or consulting the sale catalogue and forwarding bids on the offerings that will go to the highest bidder at Fort Scott, Kas., on Tuesday, September 6. Among the sixty-one head that have been catalogued are nine serviceable boars whose progenitors have no superior in World's Fair history nor in the several annual State fair contests that have taken place since the memorable exhibit at the Columbian. A glance through the catalogue shows that the offerings are the sons and daughters of twenty different herd boars, any one of whose pedigrees shows them to be of the choicest breeding, backed by a train of show ring history. It may occur to the mind of the reader to inquire, "What means this Poland-China Sale Association, composed of Messrs. Hornaday, Adamson, Turley and Young?" It is perhaps best briefly answered, that each one selects out of his herd from the division ready to go the sure best ones, and, by offering all four lots at one sale, save expense; also it affords the intending buyer a better opportunity to select individuals from a more numerous array of breeding, thereby saving

JUDGE ZIEGELASCH

Pronounces sentence on

The Farmer's Friend!

This is to certify that I have used Seelye's Wasatusa in my family for two years and WILL NOT BE WITHOUT IT. I heartily recommend it to any person.

WM. ZIEGELASCH, Probate Judge, Junction City, Kas.

H. Hensley, of the firm of Hensley & Masterson, wholesalers, St. Joseph, Mo., writes: "I need Wasatusa and hope you will ship at your earliest convenience one dozen bottles. I am out of it entirely, and as it seems MY LIFE ALMOST DEPENDS ON IT you will greatly oblige me by shipping as promptly as possible. I need it for kidney trouble."

Another writes that his daughter WAS THROWN INTO A BARBED WIRE FENCE from a horse, badly out, and

WASATUSA

THE GREAT HEALER

healed all lacerations nicely and SAVED \$500 DOCTOR BILLS.

Wasatusa stands without an equal as a Healer and Quick Pain Remover, internally and externally, in man or beast. Try it.

A safe remedy for every home in America. Insist on your druggist getting it from the wholesaler for you. Price 50 cents and \$1 per bottle, or address

DR. A. B. SEELYE MEDICINE CO., ABILENE, KANSAS.

WASATUSA, the Great Healer, successfully cures Rheumatism, Colic, Cramps, Sprains, Cholera Morbus, Accidents, Summer Complaint, Diarrhea, Headache, Catarrh, LaGrippe, Neuralgia, Sores—pains of all kinds, no matter where or by what name known.

ASK YOUR GROCER FOR

Dr. Seelye's Flavoring Extracts.

Triple strength. The best on the market.

him expense and time in founding or recruiting his herd. The brood sows and gilts are a very choice lot and the sows in expectancy are bred to as strongly bred a lot of herd boars as can be found in the entire West. There is not one inferior or one to be faulted in the entire list of herd boars. Space forbids that extended individual mention that each of the four consignments merits, save to say that the writer takes it on himself to state that if the reader is after something that ought to prove both fashionable and profitable, he is sure to find it at Fort Scott, on Tuesday, September 6, if he will but send or go after it.

The ladies of the G. A. R. have arranged for through train to Cincinnati via Santa Fe on September 5. The round trip is \$16.10. An excellent opportunity to give your family an outing.

The Apiary.

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

The Bee and Honey Exhibit at Omaha.

The Apiary building at the Trans-Mississippi International Exposition is located on the North tract, directly opposite the Transportation and Agricultural Implement building. It belongs to what is familiarly known as the Swiss farm house style of architecture and is declared by experts to be the best-arranged and most convenient building ever erected for bee exhibits. The building is 148 feet long by 75 feet wide and is built of wood and staff. All the heavy timbers exposed are painted a red brown color, while the roof is green and has a sky-light on each side of the ridge pole that extends the length of the building. Every precaution has been taken to insure plenty of light, as it is an important adjunct in displaying a honey exhibit. In addition to the skylights there are numerous windows and the show cases have glass on both sides and tops. The interior of the building has been prettily decorated with draperies of yellow and white, and the names of the counties exhibiting are shown in comb honey.

The Nebraska display is arranged in a case that extends along the south side of the building. The exhibit is very attractive and complete and contains a large array of samples of honey, both in

its purity. Adulterations, such as glucose, etc., never granulate, hence when you see honey on the markets, especially during the winter season, that is in liquid form, you may look upon it with suspicion. Now, most people think it the reverse of this, and this is the principal reason that adulteration is practiced to such an extent. The bee journals and producers of honey generally have done everything in their power to educate the masses in regard to this one fact, but progress seems to be slow. Comb honey has never yet been imitated by man; although it has been published that comb honey is being manufactured by machinery, it is not true. Comb honey may be adulterated by feeding bees cheap sirups, which they will store in the combs, but it can only be done through them.

Honey improves with age, and the older it is the finer the flavor. Extracted honey is much easier kept than comb, as the latter is liable to get soiled and must be kept in tight cases to exclude dust and insects. Extracted honey may be kept in any quantity, either in open or tight packages. Tin cans are mostly used, and a very convenient and cheap package is the common fruit can, which, having a large opening, will admit of removing the honey after granulation and using it in this form. Honey should always be kept in a dry place, and away from a collar, except the same is very dry and well ventilated. Heat does not damage honey, but tends to ripen and improve it. Dampness and darkness will not agree with it. Honey that remains in the combs for some

What Makes Success?



It is a universally acknowledged fact that the LITTLE GIANT is the most popular dairy machine ever put on the market. Its points of excellence are economy in running, a superior quality of cream, the cleanest of clean skimming and a bowl that does not clog up and which is easy to wash. Send for circulars giving full information.

BRANCHES: **P. M. SHARPLES,**
Elgin, Ill.
Omaha, Neb.
Dubuque, Iowa.
West Chester, Pa.

given them, and will continue to do so as long as you feed them.

Ten pounds of sugar thus fed a colony of bees in autumn will double its value in the following spring, and usually from such we get the largest yield of honey during the honey harvest. All those who keep bees should follow these little details in management and the good results that follow will be surprising and well pay for the attention. Very frequently colonies of bees do not have honey sufficient to carry them through the winter and are left perhaps to starve, when, in fact, they may be fed in autumn the necessary amount of supplies, and by such treatment they are made to produce a lot of young bees

28 YEARS CONSTANT USE



by wind mill users attest the value of our "Old Reliable"
DIRECT-MOTION WOOD MILL.
Used for either pumping or power. Made in 3 sizes—from 16 to 24 feet. Don't buy until you inquire into its merits. Free catalogue. PERKINS WIND MILL CO., 31 Race St., MISHAWAKA, IND.

THE STRAY LIST.

FOR WEEK ENDING AUGUST 11, 1898.

Wyandotte County—Leonard Daniels, Clerk.
MARE—Taken up by William Barrett, whose residence is one and three-fourths miles west of Turner, in Shawnee township, Wyandotte county, July 14, 1898, one bright bay mare, 5 years old, 14½ hands high, black mane and tail, white spot in face, right hind foot white; valued at \$25.
MARE—Taken up by same, July 14, 1898, one dun-colored mare, 9 years old, 15 hands high, dark mane and tail, white spot in face, right hind foot white, splint on left front leg; valued at \$5.
Pottawatomie County—A. P. Scritchfield, Clerk.
MULE—Taken up by E. B. Sherman, April 14, 1898, whose residence is Lone Tree township, Pottawatomie county, one mouse-colored mare mule, 5 years old, mark in right ear, weight 650 pounds; valued at \$25.
Osage County—William H. Thomas, Clerk.
COW—Taken up by J. C. Lawson, whose residence is Quenemo, Agency township, Osage county, July 19, 1898, one red and white cow, 9 years old, ears cropped; valued at \$25.
HEIFER—Taken up by same, July 19, 1898, one white heifer, 3 years old, no marks or brands; valued at \$20.
Shawnee County—John M. Wright, Clerk.
MARE—Taken up by W. E. Corbett, Mission tp. (P. O. Seabrook), July 13, 1898, sorrel mare, 5 years old, five feet two inches high, star in forehead, right hind foot white, foretop clipped.
HORSE—Taken up by M. Cole, in Soldier township, June 27, 1898, one brown horse, 8 or 9 years old, white hind feet; valued at \$35.

FOR WEEK ENDING AUGUST 18, 1898.

Linn County—C. O. Hoag, Clerk.
STEER—Taken up by L. J. Brough, Centreville township, July 14, 1898, one red and white yearling steer, under-bit in left ear; valued at \$20.
Montgomery County—D. S. James, Clerk.
MARE—Taken up by M. Sney, in Drum Creek township, May 17, 1898, one gray mare, about 9 years old, about fourteen and a half hands high, black mane and tail, scar on left cheek.
PONY—By same, one bay pony, about 6 years old, about fourteen hands high, blemish on right side the two animals valued at \$50.

FOR WEEK ENDING AUGUST 25, 1898

Cowley County—S. J. Neer, Clerk.
HORSE—Taken up by J. C. Sulton, in Ninnescah tp. (P. O. Seely), July 20, 1898, one dark bay horse, medium size, star in forehead; valued at \$20.



GRANT MONUMENT, FORT LEAVENWORTH, LEAVENWORTH, KAN.

From a photographic view taken along the line of the Missouri Pacific Railway

comb and extracted. A unique feature of the Douglass county exhibit is the bottled wine and vinegar manufactured from honey.

In the center aisle a large collection of pressed honey- and pollen-producing flowers and plants are displayed in a large case. Nebraska is represented by 1,800 different specimens. Other States exhibiting are Iowa, Wisconsin, Minnesota, Kansas, Missouri, Ohio, Texas and Utah.

Two liquefying rooms fully equipped with utensils used by bee-keepers are located in the west end of the building for the convenience of exhibitors. There is also a large assortment of hives and extractors and other articles required for bee-keeping.

A comfortable reception room has been fitted up for visitors in the gallery, where three colonies of bees may be seen at work in glass hives and passing back and forth from near-by gardens through holes made in the wall for their accommodation.

Care of Honey.

There is no limit to the time that honey will keep if not abused. Thoroughly sealed comb honey is usually in its highest state of perfection, and extracted honey is just the same, providing it has been sealed over before extracted, or left in the comb until it thoroughly ripens. Comb honey usually remains in liquid form, but in some instances it granulates in the comb, the same as extracted. It has been said that honey from alfalfa is more apt to granulate in the comb than almost any other, and this has been my experience. Granulation of extracted honey is no detriment to it, and is always proof of

time after being stored is always the best article when extracted, but more pounds are secured by taking it away as fast as well stored.

Autumn Honey.

A honey flow in autumn is very advantageous to bees, and in localities where bees gather honey during the autumn months they almost invariably come through the winter better and prove more profitable in early spring. I have very frequently noticed that after a severe dearth of honey during autumn months, bees come out very weak in the spring and many do not survive the winter at all. This is true from the fact that bees only rear brood to any considerable extent at a time when they are gathering honey, and, as is usually the case, the principal honey season closes in or near the middle of summer, hence brood-rearing ceases, and as a consequence the bees become so old that they must die largely of old age before spring.

When no honey is being gathered by the bees during autumn months, they may be made to rear brood by feeding. This does not require much feed, but only some little trouble and attention. Bees may have plenty of reserve stores for wintering, but it matters not how much honey they may have on hand, brood-rearing ceases all the same, and nothing will induce them to rear brood at such times but feeding a little sirup every day, thus representing a natural flow of honey. It is remarkable to see how readily a little feed thus daily given them will stimulate them to business, and the queens will begin to lay eggs immediately even after the first feed is

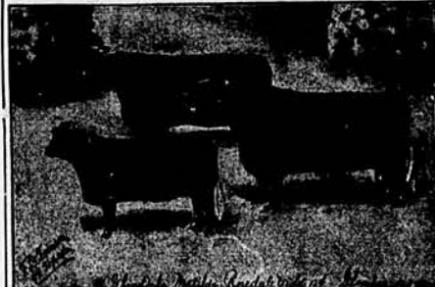
that will survive the winter successfully. Do not pretend to feed bees during winter. It cannot be done.

Meeting Sovereign Grand Lodge, Boston Mass., September 19-24 Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round trip. Tickets on sale September 16 to 18, inclusive, good returning until September 30, inclusive. For particulars address J. Y. Calahan, General Agent, 111 Adams St., Chicago. 59

Electric fans to keep you cool are new and timely features of Santa Fe Route dining cars.

Don't forget the excursion to Boston over the Nickel Plate road, September 16 to 18, inclusive, at rate of \$19 for the round trip. Good returning until September 30, 1898, inclusive. 60

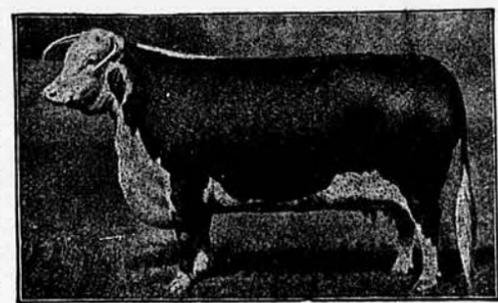


GLENDALE SHORT-HORNS, Ottawa, Kas. Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 11970, by Ambassador, dam Galanthus, and Scotland's Charm 12724, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale. C. F. WOLF & SON, Proprietors.

ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruickshank bulls, Imp. Thistle Top 83876, Earl of Gloster 74523, etc. Size, color, constitution and feeding qualities the standard. Address T. K. TOMSON & SONS, DOVER, KANSAS.



SUNNY SLOPE
EMPORIA, KAS.
REGISTERED
HEREFORD
CATTLE.

ADDRESS ALL CORRESPONDENCE TO.....
C. S. CROSS, Emporia, Kansas.

The Home Circle.

THE RURAL POET'S LAMENT.

I've be'n writin' fur the papers
Fur forty year or more;
I've be'n cuttin' funny capers
An' buyin' stamps galore.
I've be'n doin' jokes on wheelin',
'Bout the farmer an' his hay—
But I see no checks a-stealin'
An' a-hustlin' out this way.

I've be'n spinnin' leetle verses
'Bout the vierlets o' spring,
An' I often do rehearses
'Bout the harp with broken string.
I hev holsted my appeallin'
Warble in the night an' day—
But I see no checks a-stealin'
An' a-hustlin' out this way.

In the summer I've quit mowin'
When the fog wuz on the lea,
An' I've sot my muse a-blowin'
Of hur agony a-free;
I hev put myself a-kneelin'
'Fore a malden, dreamy, gay—
But I see no checks a-stealin'
An' a-hustlin' out this way.

In the winter I hev faltered—
Threshin' wheat out in the barn,
An' I've stole away an' hultered
Ole Pegasus up, by darn!
I hev spun odes 'till the squealin'
Of the pigs they called fur whey—
But I see no checks a-stealin'
An' a-hustlin' out this way.

I have dropt my hoe in plantin'
In the very middle row,
An' I've sot the galevantin'
Muse a-buzzin' on the go.
I hev kept no songs concealin'
In my buzum fur a day—
But I see no checks a-stealin'
An' a-hustlin' out this way.

So I think as now I'd better
Give ole Toll a leetle chance;
An' the rusty Muse, I'll let hur
Slip her halter on the prance.
An' I'll turn to the annealin'
Of ole Earth, perhaps then, say—
I will find sum checks a-stealin'
An' a-hustlin' out this way.
—H. S. Keller.

AN INDIAN INVASION.

Omaha, Neb., August 20, 1898.—A little more than thirty-five years ago the people of Omaha were called to arms to defend their homes and families against a threatened invasion of Sioux warriors. An expedition sent out to put down the uprising succeeded so well that never since has there been any cause to fear a second visitation. In the intervening years the red man has been penned up in the reservations which Uncle Sam provided for his well-being, and it has been impossible for poor Lo to organize boards of strategy and swoop down upon this beautiful and peaceful city. To-day, however, the Indians are here by invitation and by the grace of the Indian office at Washington. They come from all parts of the United States, and represent no less than forty distinct types of the North American Indian. When the United States Congress appropriated \$40,000 for this purpose it was the intention to assemble at Omaha members of every tribe and to show, possibly for the last time, representative types of a race destined to extinction by the slow but sure advance of civilization. Over 300 Indians have already been brought here, and before the Exposition closes in November fully 1,000 aborigines will be found on the camping grounds on the north tract. At intervals they will participate in festivities peculiar to their tribes, and in their barbarous dances to which legendary lore has contributed much romantic interest. In lieu of a better name, the promoters of this great enterprise have styled it the Indian Congress. The opening session was called to order August 4, by Capt. W. A. Mercer, U. S. A., who, by direction of the War department, is high chieftain of all the tribes now at Omaha.

The opening of the congress was attended with ceremonial, savage and civilized, and drew one of the largest crowds of the season to the grounds. In the forenoon 150 children of the plains and forest, mounted on ponies and gaudily painted and costumed, paraded the principal down-town streets, and on their return to the Exposition grounds Captain Mercer gathered his charges in front of the office building, where they participated in a flag raising. As the stars and stripes ascended the pole, the band from the Indian school at Flandreau, S. D., played the "Star-Spangled Banner," and as it fluttered to the breeze three cheers were raised in as many languages and dialects as there were tribes represented. The sounds were strange, but the cheers were given with a hearty good will, and the hundreds of whites who were looking on were not slow to join in.

After the Indians had dined, the parade was formed. A squad of Exposition police marched in front, ostensibly to clear the way, but as the onlookers showed far greater deference to the blue paint of the savages than to the blue uniform of the officers, their presence was largely a matter of form. Next

came the Indian band of twenty instruments, and then there were hundreds of Indians on foot. Their apparel was gaudy in the extreme. Paint, feathers and blankets formed the basis of most of the costumes. Big war bonnets of eagle feathers, garments made of skins, hair and beads, and great patches of arms, or legs, or backs with nothing on them but a heavy layer of red or blue paint gave the affair a most picturesque appearance. In the line of march was an Indian sledge drawn by a pony and bearing three or four tom-toms which the painted and feathered musicians beat constantly as the procession wended its way through the Midways and round the Bluff Tract and back to the encampment. Another sledge laden with tom-toms followed a short distance down the line. The Indians who rode were clothed in all of the known colors and painted to perfection. The faces of some were a dead white, others were black, while others were red, blue or green. There were as many styles of painting as there were Indians. Eagle feathers formed a feature of the attire of many, especially the Rosebud, the Brule and the Standing Rock Sioux. There were carried all of the Indian implements of ancient and civilized warfare. Some had the modern rifle, some the tomahawk, while plenty had bows and arrows. Many a brave had a bunch of scalps dangling at his belt, while others held aloft, and waved with great satisfaction, great bunches of flesh, to which was attached hair, not human flesh and hair, but flesh and hair torn from a beef that had been slaughtered during the morning hours.

After the Indians had returned to the enclosure, the public was admitted to witness dances and sports of various descriptions. In the center of the grass plot some twenty bucks and squaws seated themselves in a circle and began to beat the tom-tom. Other Indians quickly gathered and the fun began. The dance was designated as He Lu Ski, which when put into English means nothing more than Brave Dance. This is a dance for the Winnebagoes and Omahas, and they were the only ones who participated. An Indian would start out with a slow swinging step. This he would continue for a time. Gradually he would move faster and faster, continuing till he fell exhausted. Then others would dance and fall until about all had taken a tumble.

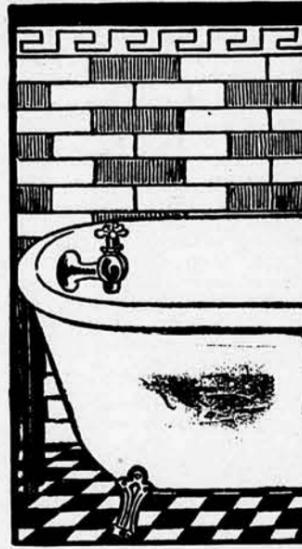
To celebrate the occasion, Tom Sloane, an Indian attorney from the Omaha agency, presented a silver medal as big as a saucer, to Stone, one of the Foxes. Gift-making proved contagious, and Silver Brown, of the Omahas, in the best language he could command, said he would give a pony to the Indian he loved best, and requested S. A. Combs, a white man, to name the recipient. Combs picked out Smoke Maker, and Mr. Maker got the pony. Mr. Brown then explained that it was the custom for some person to give away a pony when the He Lu Ski dance was given, and as he had hundreds he thought it his duty to do the giving.

Oh Le She None, who boasts of having seen 113 summers, then led more dancing, and this was followed by horse racing and a game of lacrosse between picked teams of Winnebagoes, which was stopped by darkness.

During the morning hour there was a dress rehearsal, a number of the tribes putting the finishing touches on the dances which they will give during their stay. A large ring was roped off for the purpose of preventing the whites from crowding upon the dancers. This ring is about 100 feet in diameter. The band stand, or rather the band ring, is in the center, and here the Indians will sit upon their haunches and beat out doleful music, while around them will gyrate the painted and feather-bedecked children of the mountain, plain and forest.

The ball opened by a party of Assinaboines putting on a friendly dance, which, when uninterpreted, is "Ki Yi Hi." The dance is an easy, swinging affair, the movement being similar to that of a chicken that hops about with badly frozen feet. This dance continued for an hour or more, after which a number of squaws injected themselves into the ring and gave a dance peculiar to the women of the Sioux tribe. Like all other Indian dances, this one was accompanied by singing and the beating of wheezy drums. It is apparent that time and harmony don't count for much with Indians when they dance, noise being the principal accompaniment. The women were beautifully painted, red being the prevailing color, though there were many bright stripes of black artistically daubed across their cheeks, lips and foreheads.

Mrs. Hits - the - Eagle - High - in - the Clouds was the belle of the ball and won frequent and uproarious applause.



Health Success

of the bath depends largely on cleanliness of the bath tub. Court health and shun sickness by using

GOLD DUST WASHING POWDER

for all household cleansing purposes. Largest package—greatest economy. Sold everywhere. Made only by THE N. K. FAIRBANK COMPANY, Chicago, St. Louis, Boston, New York, Philadelphia.

Her step was as light as that of a young fawn, while her costume was strikingly fetching. She wore a dress of red blanket, cut decollete at both top and bottom. Over this she wore muskrat skin trimmed with red flannel. Her jewels consisted of elks' teeth and bear claws.

Miss Runs-Like-the-Deer was attired in a dainty suit of yellow calico, reaching to her knees, a girdle of brass encircling her waist. She encased her feet in slippers of buckskin, hair side in, the tops worked in porcupine quills, dyed red and blue. Her pantalettes were of blue blanket, cut bias, and trimmed down the sides with white braid.

Although quite fleshy, Mrs. Knows-No-Fear danced as lightly as though she was made of feathers, notwithstanding the fact that she tips the scales at 205 pounds. Her costume was rich in the extreme. It was of yellow squaw cloth, a kind of flannel, and was profusely decorated with clam shells and pieces and strips of otter fur. She wore her hair down her back, with a crown of hawk feathers, dyed crimson, encircling her head.

Miss Rides-the-Wind, from the Black-foot agency, tried to outshine her friends, and some of the spectators thought she did. She wore a beautiful robe of buckskin, tanned a bright yellow and hand-painted. It was covered with figures representing hunting scenes with Indian tepees in the background. Her black hair was gathered in the back and held in place by a strip of red braid, which hung nearly to the ground. She carried a turkey wing for a fan.

There were many other striking costumes which were greatly admired, especially by the white women who stood around the ropes.

Representatives of the following tribes took part in this ceremonial: Bad River and Sac du Flambeau Chippewas, Rosebud, Lower Brule, Cheyenne, Sisseton, Flandreau, Standing Rock and Crow Creek Sioux, Sacs and Foxes from Iowa, Foxes from Mississippi, Assinaboines, Omahas, Winnebagoes, Blackfeet, Arapahoes, Jicarilla Apaches, Nez Percés, Comanches, Wichitas, Bannocks, Pueblos, Osages, Iroquois and Poncas. Members of other tribes are arriving daily. Frequent exhibitions of blanket making, canoe making, etc., and of all kinds of Indian sports and dances will be given until the close of the Exposition.

The conception of the Indian Congress, like that of the Trans-Mississippi Exposition, originated with the Omaha Bee, whose editor, with the aid of Senators Allen and Thurston, Congressman Mercer and other representatives of the trans-Mississippi States, succeeded in enlisting the active interest of the Indian Bureau and Secretary of the Interior Bliss in the project and in procuring a Congressional appropriation to defray its expenses. Had it not been for the delay in the passage of the Indian appropriation bill, caused by the pressure of war measures, the Indian Congress would have been installed at the opening of the Exposition.

The Indian Congress does not contemplate merely an encampment of tribal Indians, housed in native habitations and carrying on various native festivals, but also periodic Indian festivals, participated in not only by the Indians in attendance, but by additional members brought from the larger reservations for these special occasions. These Indian festivals, illustrating the religious and social rites of the American Indian, will be not alone interesting as a show feature, but instructive from the educational and scientific standpoint, affording students of ethnology and sociology an opportunity never before presented and never likely to be again within their reach.

The Helpful Home Circle.

Although silent a long while, I am reminded of former friends who used to talk to me on this page and whom I know only as "Englishwoman," "Bramble Bush," "Phoebe Parmelee," and "Mystic," and from whom I would love to hear again, and possibly by talking a little to them now, I may encourage them to talk to me. I have found in times past that the "Home Circle" cheers the many housewives and daughters throughout our great and glorious State who are ever busy, and when a moment comes in which they can rest they like to pick up the Farmer and read the good things therein by the names above mentioned. I would love to have them tell of some new and better way to live, cook, sew, and tend the sick.

Now I have six children to send to school and they must be comfortably clothed for fall and winter. Who can give me some new idea how to do it economically?

Now, for my part, I will tell how we are putting up fruit and some methods learned from "way down East." The past few years my John has gathered some persimmons, and as I did not know how to use them except to eat while fresh, I thought of how my dear grandmother Marshall said she used to "put down" wild grapes in Pennsylvania. She said: "Pick all the good ones from the stems, wash and dry them, then fill your jar or crock and pour strained honey over them, putting a plate on the grapes so as to keep them under the honey, and they will be found nice for pies in winter and spring. I have tried this with both grapes and persimmons, only using granulated sugar, for I had not the honey. I see that strawberries are being "put up" the same way, allowing one cup of sugar to one of berries, turning sugar in so as to fill up all space, and seal tightly. Some mash the berries; why not other fruit? What is nicer than red raspberry jam? What kinds grow best with you? Ours all died except one bush. Has any one found a way to keep grapes fresh until Christmas time in Kansas? They do back in the East, but I have always failed to keep any even so late as October. I think it is because the grapes ripen so much earlier here.

Has any of "Home Circle" made a success with an incubator? If so, I would like to hear all about it—the size, kind, price and the time it took to learn.

Now while I am asking questions, I will also tell a little about cattle-raising, as follows: An old, successful cattle herder said, if people would put one bucketful of lime with each barrel of salt their cattle would be healthier and fatten better. He had so much faith in it that he was sure the cattle would not have "blackleg" or other diseases if salt and lime were constantly before them in the proportion mentioned. He had handled cattle forty or fifty years. JOHN'S WIFE.

Virgil, Kas., August 11, 1898.

Electric fans are cooling. You get them and other reasonable articles in Santa Fe Route dining cars.

Free to all Women.

I have learned of a very simple home treatment which will readily cure all female disorders. It is Nature's own remedy and I will gladly send it free to every suffering woman. Address Mabel E. Rush, Joliet, Ill.

Mothers! Mothers!! Mothers!!!

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

The Young Folks.

BINGEN ON THE RHINE.

A soldier of the Legion lay dying in Algiers
There was lack of woman's nursing, there
was dearth of woman's tears;
But a comrade stood beside him, while his
life-blood ebbed away,
And bent with pitying glances, to hear
what he might say.
The dying soldier faltered, and he took
that comrade's hand,
And he said, "I nevermore shall see my
own, my native land;
Take a message, and a token, to some dis-
tant friends of mine,
For I was born at Bingen—at Bingen on
the Rhine.

"Tell my brothers and companions, when
they meet and crowd around,
To hear my mournful story, in the pleas-
ant vineyard ground,
That we fought the battle bravely, and
when the day was done,
Full many a corpse lay ghastly pale beneath
the setting sun;
And, mid the dead and dying, were some
grown old in wars—
The death-wound on their gallant breasts,
the last of many scars;
And some were young, and suddenly be-
held life's morn decline—
And one had come from Bingen—fair Bin-
gen on the Rhine.

"Tell my mother that her other son shall
comfort her old age;
For I was still a truant bird, that thought
his home a cage.
For my father was a soldier, and even as
a child
My heart leaped forth to hear him tell of
struggles fierce and wild;
And when he died, and left us to divide his
scanty hoard,
I let them take what'er they would—but
kept my father's sword;
And with boyish love I hung it where the
bright light used to shine,
On the cottage wall at Bingen—fair Bin-
gen on the Rhine.

"Tell my sister not to weep for me, and
sob with drooping head,
When the troops come marching home
again with glad and gallant tread,
But to look upon them proudly, with a
calm and steadfast eye,
For her brother was a soldier, too, and not
afraid to die;
And if a comrade seek her love, I ask her
in my name
To listen to him kindly, without regret or
shame,
And to hang the old sword in its place
(my father's sword and mine)
For the honor of old Bingen—dear Bingen
on the Rhine.

"There's another—not a sister; in the
happy days gone by
You'd have known her by the merriment
that sparkled in her eye;
Too innocent for coquetry—too fond for
idle scolding—
O friend! I fear the lightest heart makes
sometimes heaviest mourning!
Tell her the last night of my life (for, ere
the moon be risen,
My body will be out of pain, my soul be
out of prison),
I dreamed I stood with her, and saw the
yellow sunlight shine
On the vine-clad hills of Bingen—fair Bin-
gen on the Rhine.

"I saw the blue Rhine sweep along—I
heard, or seemed to hear,
The German songs we used to sing, in
chorus sweet and clear;
And down the pleasant river, and up the
slanting hill,
The echoing chorus sounded, through the
evening calm and still;
And her glad blue eyes were on me, as
we passed, with friendly talk,
Down many a path beloved of yore, and
well-remembered walk!
And her little hand lay lightly, confidently
in mine—
But we'll meet no more at Bingen—loved
Bingen on the Rhine."

His trembling voice grew faint and hoarse
—his grasp was childish weak,
His eyes put on a dying look—he sighed
and ceased to speak;
His comrade bent to lift him, but the spark
of life had fled—
The soldier of the Legion in a foreign land
is dead!
And the soft moon rose up slowly, and
calmly she looked down
On the red sand of the battle-field, with
bloody corpses strewn;
Yes, calmly on that dreadful scene her
pale light seemed to shine,
As it shone on distant Bingen—fair Bingen
on the Rhine.

—Caroline E. Norton.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 35.

THE WATCH ON THE RHINE.

As remarked in a former letter, the
scenery along the Rhine increases in
beauty from Bonn southward to Bingen.
From Coblenz to Bingen the channel
of the river is confined within steep
banks by mountains, which frown at
each other on either side. A railway
and highway are built, mined and tun-
nelled, on both sides of the river, but
one in traveling over them could only
see the opposite side. While we would
have enjoyed riding our wheels all the
way to Bingen, we concluded that, in
order to keep a complete watch on the
Rhine, the deck of a steamer would be
better for this purpose, as it would af-
ford an opportunity to see the moun-
tains on both sides.

On the morning of June 20 the weather
and sky were all that could be desired

for sight-seeing. At 10 o'clock we went
on board the steamer Kaiser Wilhelm
I., and in a few moments the bridge of
boats swung open to let us pass up the
Rhine, and soon the beautiful city of
Coblenz and the majestic Ehrenbreit-
stein are left to us only in pleasant
memory. But we left them only to find
new beauties opening out before us;
nearly every jutting point along the
river is crowned with a bristling fort-
ress, a beautiful modern chateau or the
ruin of an ancient castle.

The first to especially attract our
notice was the pentagonal towers of the
castle Stolzenfels. The little village by
the water, the densely wood-covered
mountains behind, and beyond them all
more mountains and trees, made a pic-
ture long to be remembered. It seemed
queer to me that the knights of olden
time did not build their castles on the
summit of these mountains; but instead
they were located about half way up the
mountain side in the midst of dense
wood. Stolzenfels was built on the site
of an older fortress by Arnold, Arch-
bishop of Treves, in 1242-59. In 1823
the ruin was presented by the city of
Coblenz to Frederick William IV., who
had it restored, and now it belongs to
Emperor William II., who very seldom
occupies it. It is too close to the French
border, perhaps.

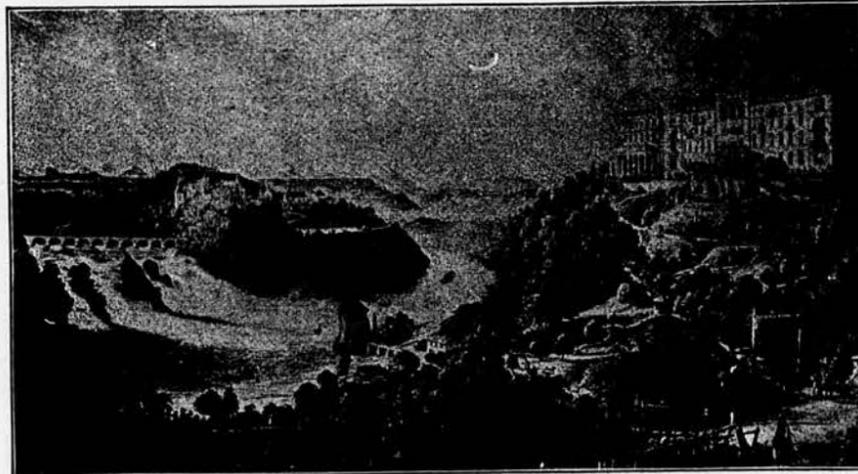
After a long bend of the river we see
the two castle ruins, "Sterrenberg" and
"Liebenstein," better known as the
"Two Brother Castles," and thereby
hangs a tale.

Conrad and Heinrich were the sons of
Knight Bayer von Boppard, the Lord of
Liebenstein. They both fell in love with
the same pretty German girl, Hilde-
garde, their foster sister—a very foolish
thing for them to do when there have
always been plenty of pretty Dutch
girls. The brothers loved each other

when he came back, but that would
have spoiled the story, I suppose. It
subtracts all the poetry and romance in
the story now, when one learns that both
castles are used as restaurants for tour-
ists; but then, half the ruined castles
along the Rhine are used for a similar
purpose. The Germans cannot enjoy
anything, however beautiful, if there is
no eating and drinking connected with
it. However, aesthetic Americans are
not backward about taking advantage of
this fact when weary with sight-seeing,
and to be able to get a nice roll and cup
of chocolate while looking at beautiful
ruins is appreciated. Besides rolls and
chocolate there are always oceans of
beer and wurst for those who live any-
where but in Kansas.

At the little villages we passed we
could see women with immense baskets
of cherries, which they offered for sale.
This locality is famous for fine cherries,
and no doubt much of the dried cher-
ries sold in America come from the
Rhine valley, but they, when fresh, lack
the fine flavor of Kansas fruit.

Passing many more vineyards and
small towns, the next ruin of importance
is the "Rheinfels." This castle was
built in 1245, and, as all castles of that
time, it was used for military purposes.
In 1692 it was bravely and successfully
defended by the Hessian General, von
Goerz, against the French General,
Count Tallard, with an army of 24,000
men. In 1797 it was blown up and in
1812 it was sold for the paltry sum of
\$500. It was purchased in 1843 by Wil-
liam, Prince of Prussia (later King Wil-
liam, then Emperor), and it now belongs
to the crown. The ruin presents much
the same appearance as other ruins—
here a tower, there one side of a wall,
pierced with great holes where were for-
merly windows, or port-holes for firing
cannon.



FALLS OF THE RHINE, SCHAFFHAUSEN.

dearly, and Heinrich, with rare gener-
osity, though it nearly broke his heart
in twenty-two pieces, surrendered his
claim to his brother Conrad and went
off to the Crusades to kill Satan and
enjoy other religious rites. The old
knight, Bayer von Boppard, in order to
have his sons reside near him, built the
castle Sterrenberg for Conrad and Hilde-
garde, intending the home place, Lieb-
enstein, for Heinrich, when he should
return from Jerusalem. Then the old
knight died and Conrad changed his
mind and went skylarking somewhere,
leaving Hildegard alone in the castle
of Liebenstein. In six months or so
Conrad returned with a handsome wife
from Greece, and poor Hildegard was
all "broke up" over the affair, and shut
herself up in the loneliest chamber of
Liebenstein and refused to see any one
but her attendants.

Late one evening a stranger knight
appeared and demanded the hospitality
of the castle. He was the chivalrous
Heinrich, and when he learned how
Conrad had "shook" Hildegard, he
challenged him to mortal combat. They
each took turns next morning at the
"grinstun" sharpening their swords and
were ready to chop each other into sev-
enteen pieces, when the beautiful Hilde-
garde appeared between them and ob-
tained their promise to quit fighting.
She then retired to the convent of
Bornhofen, at the base of the rock on
which Liebenstein is located.

Conrad's Grecian wife proved fickle
and ran away with a handsomer man;
and then Conrad went to his brother
and fell on his neck and cried quite a
spell, and said all he had left in the
world now was his dear, dear brother
Heinrich.

The two brothers then lived together
in the one castle and advertised the
other for summer boarders, and ever
since they have been known as the Two
Brothers castles. I don't understand
why Heinrich didn't marry Hildegard

To the left of the Rheinfels appears
the huge and imposing rocks of the
Lorelei, at St. Goar; the main rock rises
directly from the water to a height of
430 feet. The legend of this rock is
that a nymph resided at the base and
did up her back hair with a golden
comb. Like the sirens in Grecian and
Roman mythology she enticed sailors to
attempt to land and they were inva-
riably broken to pieces on the rock by
the waves. We rode close to the rock.
I looked it over carefully for the nymph,
but I guess it was her "day off." I did
not see her. This is the narrowest part
of the river, 600 feet wide; and deepest,
76 feet. In this deep and narrow basin
is carried on the once very lucrative
salmon fishery of St. Goar, but I was
told that steamboat whistles and shrieks
of locomotives, together with voracious
appetites of tourists, have scared the
salmon so badly that few remain.

A little farther on the right rises the
tower of Sonneck, commanding the en-
trance to a ravine which juts out from
the Rhine. This castle was erected in
1015 by an archbishop and was destroyed
by King Rudolph of Hapsburg because it
was a robber stronghold. Possibly the
archbishop had left some time before.

The castle was "restored" in 1834 by the
late Emperor William I. (then Prince of
Prussia).

Soon we pass Schloss Rheinstein and
Schloss Johannisburg, which give names
to two famous Rhine wines. Castle
Rheinstein is very beautiful, with its
many towers and its little chapel with a
golden cross on top. It is especially
noted because Frederick, Prince of Prus-
sia, restored this castle in 1825 and af-
terward was buried under the chapel.

We passed close to the tower of
Bishop Hatto's castle, known as the
Mice Tower. You see, Bishop Hatto
hundreds and hundreds of years ago was
very cruel to lots of poor people, and
the mice "got after him." He built this
tower in the middle of the Rhine to es-
cape the mice, and then shut himself
in, but they reached there all right, and
just eat the poor, dear bishop, bones and
all. The story must be true, for there is
the tower right in the middle of the
river yet. Next we pass the lofty round
tower, called Ochsenturm, and a little
further Bacharach, perhaps named for
Bacchus—the altar of Bacchus, a rock
which shows above the bed of the river
in dry seasons when the vineyards prom-
ise well.

BINGEN ON THE RHINE.

This little town was named Vincum by
the Romans, because of its wine-bearing
slopes, and the Germans twisted the
name into Bingen; and it is much nicer,
anyway. Who would care anything
for a poem about "Vincum on the
Rhine?" The picturesque aspect of Bin-
gen is enhanced by the adjoining Rup-
ertsburg, with the ruins of a convent
and the Rochsburg, upon the summit
of which stands a chapel annually vis-
ited by pilgrims. Also the ruins of an
ancient castle where the German Em-
peror, Henry IV. was imprisoned by his
own son in 1105. There is a legend
about Bingen to the effect that the
"Nibelungenhort"—the treasure of King
Nibelung, was sunk in the Rhine near
the town. Opposite Bingen we see the
Ruedesheimer Berg, which yields an ex-
cellent wine called "Ruedesheimer."
Terrace upon terrace could be seen
loaded with vines, clear to the top of
the mountains. We counted forty-eight
stone walls, or terraces, one above the
other. These terraces are for the pur-
pose of holding the soil in place so the
vines can grow, and in some steep places
even wicker baskets are hung up and
fastened, where walls cannot be built,
to hold a little soil for another vine or
two. We saw women way up on the top-
most terrace working in the vines. They
were so high we wondered how they got
there, and imagined that ladders must
be used in some places. We now knew
where high wines were made. It is said
that Charlemagne, himself, caused the
first vines to be planted on Ruedes-
heimer Berg.

We left the steamer, and using our
bicycles we rode through the streets of
"Fair Bingen on the Rhine." Around
the corner we stopped at the little hotel
where the soldier of the Algerian legions
used to meet his best girl. Here we had
an excellent dinner, and as we sat at
table and watched the pretty German
girls who waited on us we could realize
what the poor fellow meant when he
said: "There's another, not a sister,"
etc.

Bingen is indeed pretty, but we knew
of a more beautiful sight to be enjoyed,
and as soon as we had finished our din-
ner we mounted our wheels, rode to the
ferry and were pulled across to Ruedes-
heim, from which point we wheeled to
the base of the "Niederwald."

The electric fans now operated in Santa
Fe Route dining cars are desirable and
seasonable accessories to an already un-
surpassed service.

SHORTHAND Typewriting, Book-keeping
and Penmanship thor-
oughly taught. Twelve teachers,
800 students, cheap board, and the finest Com-
mercial College Building in America. Graduates
readily secure situations. Illustrated 60-page
Catalogue FREE. Address D. L. MUSSELMAN,
President, Gem City Business College, Quincy, Ill.

A SERMON ON SAVING.

thorough, well-rounded education of the mind while their eyes are taught to see and their hands to do.

The Kansas State Agricultural College

OFFERS A CHOICE OF FOUR COURSES:

Agriculture, Mechanical Engineering, Household Economics, General.

Splendidly equipped Iron and Wood Shops, Laboratories, Greenhouses, Dairy, Sewing and
Cooking Rooms, Music Rooms, and Library. Military drill and shop work daily. Music and
Oratory free. Text books and stationery at cost. Noon lunches at cost.
No fees or charges of any kind. For catalogue or information address

PRESIDENT THOS. E. WILL, Manhattan Avenue, Manhattan, Kas.

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

HOW PREVENT FIELDS FROM WASHING?

Editor *Kansas Farmer*:—I have a tract of hillside land that has been in cultivation for about fifteen years, and is washing badly. In places much of the soil is gone and deep ditches cut by the heavy rains last spring. I am anxious to put this land permanently into grass, stop the washing and reclaim it if possible. Can you tell me the best kind of grass to sow to accomplish this and when and how to sow it? Where can I get reliable information as to the success of Bermuda grass in this locality?
Girard, Kas. **J. E. RAYMOND.**

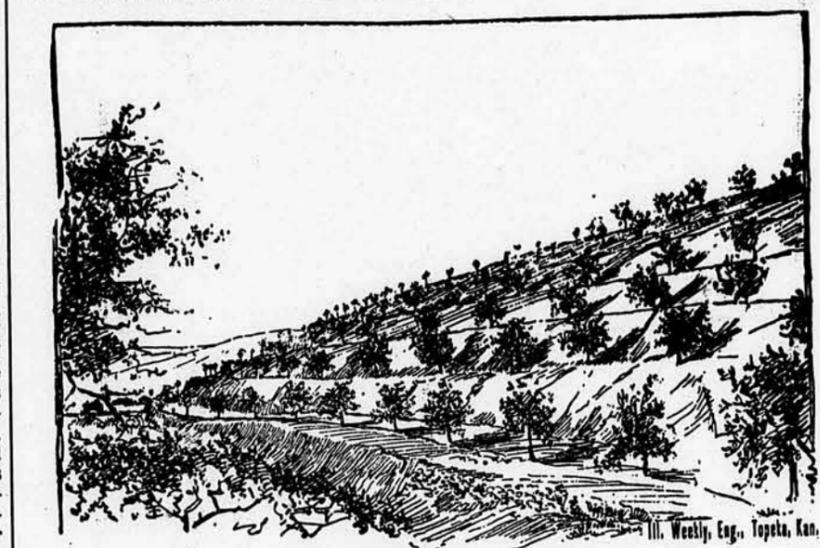
Any kind of grass is better than no grass to prevent washing. Where Kentucky blue grass thrives it is perhaps the best of all grasses to hold the soil against washing. White clover is also very good, and a mixture of Kentucky blue grass and white clover forms a good sod and yields a fair amount of pasture, but only a small amount of hay if used for meadow. English blue grass does not make so good sod as is formed by the above-named combination or by Kentucky blue grass alone, but English blue grass holds the soil against washing much better than it is held in the cultivated field, and is reported as doing well in portions of Kansas not far from that from which our correspondent writes. Timothy does fairly well in much of eastern Kansas and makes a sod which is pretty good to resist washing. Some sow red clover with timothy with good results, both on the yield of hay and on the fertility of the soil. Any of these grasses are in Kansas best sown in early spring on a well-prepared seed-bed. Fall plowing is to be preferred.
If the lay of the land is such that it washes very badly it may be necessary to resort to hillside ditches to prevent loss of soil. These are especially applicable to permanent pastures and meadows and are less objectionable in cultivated fields than is generally supposed by persons who have not used them.
Hillside ditches should be so placed as to receive the water, as it flows down the hill, before it can attain such volume as to cut the soil. They should be so laid out as to have but slight fall, say one inch fall to 100 feet in length, if this be practicable, and the fall should not exceed one inch to one rod. It is usually better that the ditches descend towards the up stream of the natural drainage of the country. In some cases, however, they may be made to double back and forth along the fall of the hill in a sort of zigzag fashion.
The illustration represents an orchard planted on a very steep hillside where it was necessary to make hillside ditches and also to terrace the land. Terracing is expensive, on account of the necessity of moving large quantities of soil. Hillside ditches are less expensive since, after the survey, most of the work is done with the plow, or at most with the plow and the road machine.

It need scarcely be said that no two hillside are precisely alike, so that every one presents a problem differing from the others. Many a bad wash may be remedied by the construction of a single ditch to carry away a portion of the water which would otherwise go to swell the volume flowing down a slight hollow until it might carry away the

soil, leaving an ugly gully. The farmer who ever used a leveling instrument may easily lay out his own ditches if he can bring himself to neglect points of the compass and run the ditches according to the lay of the land. A few suggestions may be useful to him or to the surveyor whom he may employ.
Begin at a point a little above where the wash has begun or is likely to begin. Set a stake at the place of beginning. Run up stream—as to the drainage at foot of hill—at a fall of one inch to 100 feet, or, if surveying without measuring, one inch to thirty-five steps. If the slope is tolerably uniform, a stake every thirty-five steps may be enough. If there are numerous draws down the slope, stakes must be set closer together. If the water must be discharged at the edge of the field it may be necessary to protect the outlet ditch with stone or brush. Often the discharge can be made at the roadside, where the roadmaster has already taken precautions to prevent washing. It is sometimes advisable to give the hillside ditch its fall down stream, if by so doing the roadside can be more easily reached for discharge. If the slope is long, two or more hillside ditches may be needed.

In constructing the ditch, plow furrows following the line of stakes, always turning the soil down hill. If the slope is moderate, six furrows may make wide enough strip. Harrow this strip well to settle the soil, so that it may be plowed again. Turn the second furrow on top of the first and plow four furrows this time. Repeat, turning two furrows, and again repeat, turning one furrow. If the hill is so steep that this will not make a broad ditch deep enough so that the water cannot break over the bank, it may be necessary to

plow eight or ten or even more furrows at the first. In any case, the sides of the ditch should be but gently sloping, so that the mower and the rake can be used over them.
In cultivating land whereon hillside ditches are used the rows are sometimes made to cross the ditches as nearly at right angles as possible. This is a good plan if the land resists washing sufficiently to prevent cutting near where the cultivator furrows enter the upper side of the ditch. In some cases it is necessary to run the rows along the slope of the hill, giving them two to five times as much fall as the ditches have and in the opposite direction.
The soil on many hillside in Kansas is so deep that with proper tillage the bottom of the ditch can be made as productive as any part of the field. If the bottom of the ditch and all other parts of the field be subsoiled, most fields will show very little water at the discharge end of the ditch. Indeed, there are fields in which thorough subsoiling is a complete panacea for washing. But, in any case, every farmer owes to posterity preservation from washing of every field under his care.



HILLSIDE-DITCHED AND TERRACED TO PREVENT WASHING.

plow eight or ten or even more furrows at the first. In any case, the sides of the ditch should be but gently sloping, so that the mower and the rake can be used over them.
In cultivating land whereon hillside ditches are used the rows are sometimes made to cross the ditches as nearly at right angles as possible. This is a good plan if the land resists washing sufficiently to prevent cutting near where the cultivator furrows enter the upper side of the ditch. In some cases it is necessary to run the rows along the slope of the hill, giving them two to five times as much fall as the ditches have and in the opposite direction.
The soil on many hillside in Kansas is so deep that with proper tillage the bottom of the ditch can be made as productive as any part of the field. If the bottom of the ditch and all other parts of the field be subsoiled, most fields will show very little water at the discharge end of the ditch. Indeed, there are fields in which thorough subsoiling is a complete panacea for washing. But, in any case, every farmer owes to posterity preservation from washing of every field under his care.

Who Has Such a Machine?
Editor *Kansas Farmer*:—Who can inform me where I can purchase a machine to head Kaffir corn, taking the power from the wagon wheel?
Wakita, Okla. **J. F. BOYLE.**
The headquarters of the Kansas Commission, Omaha Exposition, are at the Her Grand hotel, Sixteenth and Howard streets, Omaha, Neb. Residents of Kansas who have fresh fruit, vegetables, etc., which they are willing to send to Omaha for exhibit at the exposition, should, before sending the same, write to A. H. Greef, Secretary Kansas Commission, Omaha, Neb., for instructions with reference to shipment.

CITIES AND TOWNS OF KANSAS.

Kansas has 103 cities and towns with 1,000 inhabitants or more. The State Board of Agriculture has compiled the assessors' and County Clerks' returns and finds that sixty-eight municipalities belonging to this list have made a gain of 21,227, Kansas City leading with 4,879, while thirty-five others lost a total of 5,414. Nickerson and Anthony have fallen below the 1,000 mark, and Hays City with a gain of 81, St. Paul 53, Strong City 330, Russell 177, Caney 21 and Tonganoxie 31 have been added to the list. The cities that have shifted in their rank are Leavenworth, which now drops below Wichita; Fort Scott below Lawrence; Emporia and Ottawa come before Hutchinson; Newton before Argentine; Winfield climbs over Salina, Junction City, Galena and Coffeyville; Chanute drops below Independence; Wellington rises above Clay Center, Horton, Abilene, Holton, Olathe, Hiawatha, Paola and El Dorado; Iola jumps from the 51st to the 26th place; Concordia 36th to 32d; Osawatomie 35th to 33d; Weir City drops from 33d to 34th; Osage City rises from 38th to 36th; Manhattan falls from 32d to 37th; McPherson is now 38th instead of 39th; Girard goes down from 34th to 39th; Cherryvale is 40th instead of 45th; Cheyenne is 41st instead of 42d; Great Bend is 42d instead of 46th; Council Grove is 43d instead of 41st; Oswego is 44th instead of 43d; Rosedale is up from 50th to 45th; Burlington is 46th instead of 44th; Eureka is 47th instead of 49th; Empire City drops from 40th to 49th, and Columbus 37th to 50th place; Beloit is 51st instead of 54th; Marysville takes the 52d instead of the 47th place; Dodge City is 54th instead of 52d; Wamego

Rank.	Name.	Popu- lation.
65.	Wamego	1,916
66.	Sterling	1,754
67.	Humboldt	1,740
68.	Belleville	1,732
69.	Neodesha	1,699
70.	Herington	1,699
71.	Marion	1,663
72.	Minneapolis	1,603
73.	Fredonia	1,598
74.	Kingman	1,585
75.	Burlingame	1,547
76.	Peabody	1,545
77.	Yates Center	1,538
78.	Caldwell	1,536
79.	Sabetha	1,535
80.	Larned	1,533
81.	Washington	1,515
82.	Lyons	1,490
83.	St. Marys	1,439
84.	Garden City	1,421
85.	Baxter Springs	1,397
86.	Scranton	1,370
87.	Ellsworth	1,344
88.	Lindsborg	1,299
89.	Florence	1,284
90.	Erie	1,280
91.	Frankfort	1,267
92.	Sedan	1,188
93.	Clyde	1,183
94.	Cherokee	1,160
95.	Pleasanton	1,142
96.	Norton	1,115
97.	Valley Falls	1,090
98.	Howard	1,080
99.	Alma	1,072
100.	Blue Rapids	1,067
101.	Hays City	1,051
102.	St. Paul	1,049
103.	Pratt	1,041
104.	Augusta	1,035
105.	Strong	1,035
106.	Russell	1,032
107.	Harper	1,031
108.	Caney	1,031
109.	Baldwin	1,031
110.	Oskaloosa	1,027
111.	La Cygne	1,020
112.	Tonganoxie	1,003
113.	Osborne	1,000

Students' Meals at Cost at the Agricultural College.

Editor *Kansas Farmer*:—On opening the *Kansas Farmer* this morning I find very considerable editorial space devoted to the Agricultural College, a fact which we greatly appreciate here; and among other things the suggestion that the college furnish students full board and lodging, as well as books and supplies. You may be interested to know that before this suggestion reached us the decision had already been made to go as far in this line as the management is prepared to go without legislative help; it having been voted yesterday by a committee of the Board to furnish twenty-one meals per week to students at cost, beginning with the opening of the current college year.
It is exactly in line with my own earnest desire that the college also furnish lodging at cost, especially to the worthy and necessitous students. This we cannot do without legislative assistance. We trust our friends will be willing to aid us in procuring it.
Wishing for your excellent paper continued and enlarged success, I am,
THOS. E. WILL.

This is a move in the right direction, and will materially assist in clearing the way for many a worthy young Kansan to avail himself of the splendid educational advantages which are provided free of cost at the Agricultural College.—Editor.

Program.

Kansas State day at Trans-Mississippi and International Exposition, Omaha, Neb., will be observed on Thursday, September 1, 1898. Exercises will commence at 11 o'clock a. m. at Auditorium. Presiding officers: Hon. G. W. Glick, President Kansas Commission; Mr. John E. Frost, Vice President Kansas Commission.
Music, Caman's Military band, Winfield, Kas.
Invocation, Bishop Frank W. Mills-paugh, Kansas.
Selection, Quartet, McPherson, Kas.
Address of welcome, Governor Silas A. Holcomb, Nebraska.
Response, Governor J. W. Leedy, Kansas.
Selection, Quartet.
Address, Hon. Gurdon W. Wattles, President of the Exposition.
Address, President Thos. E. Will, Kansas Agricultural College.
Selection, Quartet.
Address, Chancellor F. H. Snow, Kansas State University.
Address, Hon. C. B. Hoffman, Kansas.
Selection, Quartet.
Address, Hon. A. W. Smith, Kansas.
Music, Band.
Short talks by prominent Kansans.
An informal reception will be tendered Governor J. W. Leedy and State officers at Kansas State building at 4 o'clock p. m.
The exercises will conclude with an elaborate display of fireworks on the Midway, furnished by the Exposition Association, in honor of Kansas.

The G. A. R. will meet in Cincinnati September 5-10, 1898. They will leave here in special train via Santa Fe, September 5. The round trip fare is \$16.10. Santa Fe agent will give you particulars.

The following table gives the cities and towns in the order of their rank, and the population of each:

Rank.	Name.	Population.
1.	Kansas City	46,028
2.	Topeka	32,651
3.	Wichita	20,745
4.	Leavenworth	20,657
5.	Atchison	16,266
6.	Pittsburg	12,323
7.	Lawrence	11,391
8.	Fort Scott	11,305
9.	Parsons	8,969
10.	Emporia	8,909
11.	Ottawa	8,775
12.	Hutchinson	8,578
13.	Arkansas City	6,940
14.	Newton	6,704
15.	Argentine	6,341
16.	Winfield	5,957
17.	Salina	5,812
18.	Coffeyville	5,134
19.	Junction City	4,971
20.	Galena	4,706
21.	Independence	4,013
22.	Chanute	3,872
23.	Wellington	3,637
24.	Horton	3,538
25.	El Dorado	3,534
26.	Iola	3,531
27.	Holton	3,498
28.	Clay Center	3,483
29.	Abilene	3,386
30.	Paola	3,325
31.	Olathe	3,315
32.	Concordia	3,260
33.	Osawatomie	3,061
34.	Weir	3,018
35.	Hiawatha	3,007
36.	Osage City	2,938
37.	Manhattan	2,925
38.	McPherson	2,871
39.	Girard	2,704
40.	Cherryvale	2,629
41.	Cheyenne	2,523
42.	Great Bend	2,514
43.	Council Grove	2,506
44.	Oswego	2,459
45.	Rosedale	2,444
46.	Burlington	2,436
47.	Eureka	2,261
48.	Garnett	2,251
49.	Empire City	2,230
50.	Columbus	2,197
51.	Beloit	2,096
52.	Marysville	2,059
53.	Seneca	1,939
54.	Dodge City	1,931

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending August 22, 1898, prepared by T. B. Jennings, Section Director.

GENERAL CONDITIONS.

A hot week, the temperature averaging about 5 degrees above the normal. A few light showers in the southern counties west of the Arkansas river, with better showers scattered through the northern counties west of Washington; better rains occurred in the eastern division and the eastern counties of the middle division, with heavy rains in the central counties of the eastern division and in Cherokee, Crawford and Labette.

RESULTS.

EASTERN DIVISION.

In the counties south of the Kaw river corn is generally in a very good condition and has been greatly benefited by the conditions of the week in all counties. Corn-cutting has begun in Coffey, Woodson, Greenwood, Chautauqua and Montgomery. Damp weather has interfered with threshing and haying in several counties. Pastures are in fine condition. Grapes are much better in the western counties than in the eastern. Peaches ripening in Coffey are wormy.

Allen county.—A large corn crop is in prospect; hay a large yield; pastures never better at this time of year; ground in good condition for plowing.

Anderson.—Good rain of 17th materially helped late corn and gardens and will prolong the excellent condition of pastures; plowing resumed.

Atchison.—The rain helped the corn; late potatoes beginning to set in some fields; peaches and apples a short crop and poor quality; prairie hay yielding less than last year.

Bourbon.—Corn crop bids fair to be largest in ten years, all early corn heavy and well filled, late corn very promising; but little wheat will be sown.

Chase.—Corn never was finer; some wheat has been spoiled from carelessness in stacking.

Chautauqua.—A favorable week for farmers and cattlemen; corn-cutting has begun.

Cherokee.—Corn crop the heaviest for years; great crop of forage; pastures fine; late peaches badly rotted.

Coffey.—The best corn crop in years, and

assured; pastures fine; stock water abundant; some plowing being done; tomato crop more assuring.

Pottawatomie.—A good week with timely rains; corn was beginning to need moisture, the crop is looking well.

Riley.—Temperature 6 degrees above normal; sunshine and rainfall about normal; a favorable week; well-cultivated corn will be a good crop; alfalfa and grass growing finely.

Shawnee.—A good week for corn, but the heavy dews and general dampness were unfavorable for curing hay.

Wabaunsee.—Recent copious rains have redeemed the corn, which was beginning to suffer; prairie haying well along; fruit scarce.

Woodson.—Corn-cutting has begun, good yield; late corn doing well; all corn will be out of the way of frost by September 10; haying nearly finished; pastures good; plowing for wheat.

Wyandotte.—Corn ripening; fruit almost an entire failure; ground in fine condition for plowing; pastures very weedy.

MIDDLE DIVISION.

Local showers have helped corn in many counties. In the southern counties the corn is in fair to good condition; in the northern and central it has dried considerably and is being cut. Much plowing for wheat has been done; threshing, haying and plowing continue and are well advanced, though in several counties the ground has become too dry to plow. Hot winds damaged some corn in the northern counties on the 19th and 20th.

Barber.—A dry, hot week; corn, cane and Kaffir doing well; pastures in fine condition; water plentiful; threshing wheat progressing, crop light.

Barton.—Weather very dry and hot, burning corn badly; corn north of river very poor, south much better; almost too dry to plow.

Butler.—Corn that escaped drought and hot winds is filling satisfactorily; with favorable weather corn will be safe from frost by October 15, except that about 10 per cent. will require all of October to mature.

Cloud.—Rain too late to benefit corn; hot winds on 20th; corn and fruit in poor condition; ground in better condition for plowing; alfalfa doing well.

Cowley.—A hot, dry week, good for threshing and hay-making; corn ripening rapidly; hay fine and abundant; second

feed making good crop; corn a good crop. Washington.—The rains have helped plowing and revived the corn, though coming too late to be of much benefit except to fodder and hay, corn being beyond help in many parts of the county; more rain needed.

WESTERN DIVISION.

A dry, hot week, with some local showers in the northern and northeastern counties. Early corn is made but it needs rain to let it fill well; late corn is in bad condition. In many counties the range grass is good yet, in some it has dried up, and in Trego some dangerous prairie fires have occurred.

Decatur.—Another dry, bright, hot week; a small night shower did some good, but the winds the past three days have been dry and at times hot, and while corn is not yet injured seriously, it is injured, and a few more such days will kill it; early corn is made, but without rain soon it will be very chaffy.

Ford.—Hot, dry week; corn crop nearly assured; cattle in fine condition; fodder a very heavy crop.

Gove.—Very dry, need rain badly; early corn all right but late corn dried up; fruit and everything needs rain.

Gray.—Dry; wheat yielding better in south part of county than north; a very hot week; not much corn in county.

Hamilton.—All crops growing nicely; a good rain night of 16-17th; grass on the range good, and stock are in good condition.

Morton.—Hot and dry; grass and fodder crops doing well; haying in progress along the river.

Ness.—A favorable week for threshing; wheat is yielding a much better quality than the first threshings, early barley yielding very well, oats generally light; some corn promises a fair yield, other corn nothing; stock looking finely; not much plowing yet, too dry.

Norton.—Local showers early in the week, from light to very good, last three days excessive heat; corn is being damaged in localities missed by the rains; grasshoppers doing much damage; no plowing done; threshing progressing, yield not as good as expected.

Rawlins.—Fine corn-growing week, warm with a few local showers; grasshoppers not so bad.

Sheridan.—Corn crop damaged some by the long dry spell and needs rain at once to make a good crop; forage crops good; potatoes a fair crop; a little too dry for fruit; pasture grass good.

Thomas.—Another dry, hot week; corn will not make much of a crop; not much threshing has been done yet, grain is in sweat; hot winds 19-20th.

Trego.—The past ten weeks dryest ten consecutive summer weeks on record; have had several dangerous prairie fires, and many wheat stacks are being burned.

Oklahoma Day at Omaha.

September 16 is the day designated as Oklahoma day at the Trans-Mississippi Exposition, and it is believed that the Territory will be much in evidence in Omaha on that day. September 16 is also Grape day, and large quantities of the fruit of the vine will be distributed free to visitors.

Oklahoma's resources are exhibited to good advantage at the Exposition. The display in the Agricultural building is greatly admired by all who see it. It occupies a prominent position just to the left of the east entrance. Around the booth is a railing constructed of pine, cedar, fir, cypress, oak, hickory, beech, birch, walnut and half a dozen other varieties of wood found in the forests of the Territory. Bundles of cut corn with stalks from twelve to sixteen feet high, all heavily eared, are used for corner pieces. Inside the booth are great pyramids of grain, including wheat, oats, barley, flax and corn, arranged in very pleasing manner. At the base of each pyramid are jars of rich, juicy fruit, flanked with new vegetables, such as potatoes, beets, sweet potatoes and cabbage, all of great size, sound and solid. Great bales of cotton occupy prominent places in the booth, while stalks in bloom and others with bulbs ready to burst are scattered wherever they will attract the most attention. Raw cotton is used in the form of wreaths, stars and garlands for decorating the booth. The exhibit is in charge of John Goble.

Governor C. M. Barnes, who visited Omaha early in August, says: "The exposition is grand beyond all conception and will go down into history as the greatest exhibition of the resources of the Great West that has ever been seen. The industrial and agricultural exhibits are as fine as the world has ever seen and they are diversified. There is apparently just enough of everything and not too much of anything. I knew all along that it was a great show, but I never had any clear conception of its magnitude until I stepped inside the gate and gazed over the grand court, which is magnificent beyond description. It is a picture for an artist. It is more beautiful than the World's Fair."

The next meeting of the Shawnee County Horticultural Society will be held at Tecumseh, Thursday, September 1. The program consists of four papers, as follows: "Peach Culture," by B. F. Van Orsdal; "Irrigating Small Fruits," by J. F. Cecil; "Plums," by F. G. Tompkins; "Enjoying Life," by Mrs. Hepsy Higgins.

Publishers' Paragraphs.

The true story of those 278 days of suffering by Greely's heroic little band of explorers in the Arctic region has been told by General Greely himself, for the first time, for the October Ladies' Home Journal. For years General Greely has kept an unbroken silence about his fearful experience and that of his companions, as they dropped dead one by one at his side, and it was only after the greatest persuasion that the famous explorer was induced to write the story.

While the roads of Kansas are usually in pretty good condition, farmers often find it very desirable to have wagon wheels which will go over the mud with the least resistance possible, and the Electric Wheel Co., of Quincy, Ill., manufactures a special wheel for farmers' wagons, which will enable them to carry a larger load with very little difficulty. Notice this company's advertisement and write for catalogue and prices.

The time of year has now arrived when farmers who have stock to feed begin to make arrangements to handle their feed in the most economical manner possible. It is generally found that grinding the coarse fodder or cutting it is much better than trying to feed it whole. The same is true with reference to corn in the ear. Stevens Mfg. Co., of Joliet, Ill., makes a specialty of manufacturing machines for the purpose of reducing grain and fodder to a condition which will make it most profitable to feed the stock. Write for catalogue and prices.

Mr. George E. Graham and Mr. W. A. M. Goode will contribute to McClure's Magazine for September, accounts of the destruction of Admiral Cervera's Fleet as witnessed by themselves from Commodore Schley's flagship, the "Brooklyn," and Admiral Sampson's flagship, the "New York." They represented the Associated Press, and were the only correspondents aboard the American ships at the time of the battle with Cervera. The articles will be very fully illustrated, largely from photographs of the actual scene, taken by the authors. The illustrations will comprise portraits of all the commanders, Spanish as well as American; pictures of all the ships; views and diagrams of the battle in its successive stages; and views of the wrecks of the Spanish ships taken soon after the battle closed.

A car-load of fruit from San Diego, Cal., consisting of the famous San Diego lemons, left August 15 en route to Santiago de Cuba for the relief of the fever-stricken boys in blue. The car is the contribution of the Red Cross Society, and transportation is furnished by Miss Helen Gould, of New York. The car is embellished with the American flag, and bears the greeting of the uttermost part of the country to the brave boys at the front. Besides about 18,000 pounds of lemons, the car contains liberal contributions of oranges, grape fruit, lemon juice, dried pears, prunes, apricots and peaches, a lot of California cream of lemon, magazines and books and numerous other articles, all given by the patriotic American men, women and children of San Diego to the soldier boys. Miss Helen Gould deserves the thanks of all patriotic citizens for using her wealth in caring for our sick soldiers, instead of giving alms to some poverty-stricken Prince across the ocean.

Through Cars to Cincinnati.

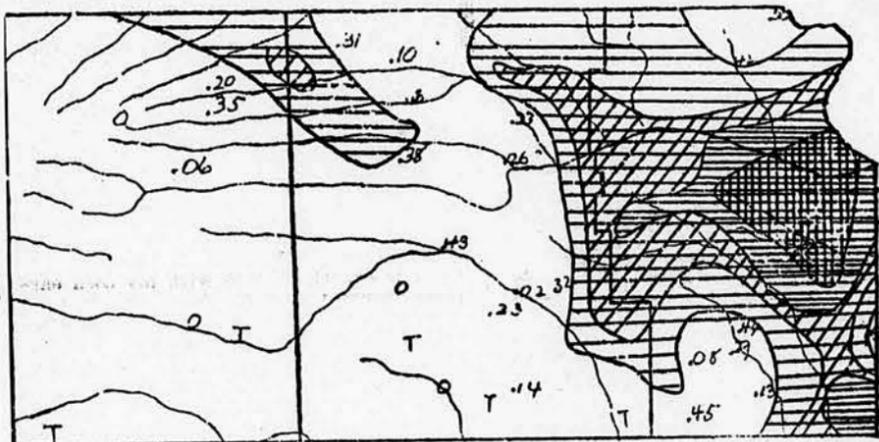
Pullman palace and tourist sleepers and free chair cars to Cincinnati without change, via Santa Fe Route, on September 5, 1898. Round trip tickets cost only \$16.10.

Do You Intend Moving?

Why not investigate southwest Missouri, southern Kansas, northwest Arkansas, Indian Territory or the Texas coast country? The manufacturing, farming and stock raising industries of these sections are attracting considerable attention. The chief centers are reached via the 'Frisco line. For ticket rates and full particulars, address Geo. T. Nicholson, Gen'l Pass. Agt. St. Louis, Mo.

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. Two separate and distinct routes through the Rocky mountains, all through tickets available via either. 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. The best line to Utah, Idaho, Montana, Oregon and Washington via the "Ogden Gateway." Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.



ACTUAL RAINFALL FOR WEEK ENDING AUGUST 20, 1898.

some have been cutting it, 50 per cent. will be safe from frost in ten days, 75 per cent. in twenty days, the crop in thirty days; wheat and flax not all threshed yet; plowing in progress; peaches a light crop, those ripening are wormy.

Crawford.—Conditions exceedingly favorable for the growth of all vegetation; grain damp and threshing hindered; peaches and grapes rotting some; sorghum hay growing very tall.

Doniphan.—Wheat poor; oats fairly good; apples very poor; corn needing rain badly; peaches and grapes ripening, but short crops.

Douglas.—Ground now in fine condition for fall plowing; early and late corn in fine condition.

Elk.—A good week for all late crops; corn nearly out of danger of frost.

Franklin.—Fine rain 17th; corn growing magnificently.

Greenwood.—Fall plowing nearly done, ground too dry to plow well; corn drying rapidly, corn-cutting begun.

Jefferson.—The fine rains greatly benefited corn, pastures, orchards and fall plowing, but very unfavorable for haying.

Johnson.—Rains and damp weather interfering with threshing, have put the ground in good condition for plowing, which is well under way, and have greatly benefited the late corn; potatoes poor except on red or sandy soil; peaches somewhat better crop than expected; flax yield generally poor.

Labette.—Good weather for plowing; many making hay; all corn is made, most of it is a good crop; ground wet and grass growing finely.

Leavenworth.—Fall plowing progressing; threshing nearly done; late potatoes promising; grapes and peaches ripening, small crops; pastures good; stock generally doing well.

Lyon.—All crops in fine condition; plowing in progress.

Marshall.—Good growing week for corn and the crop promises better than last week; weather and fields favorable to plowing; hay crop turning out lighter than expected.

Montgomery.—A good corn week; pastures in good condition; haying in progress; plowing nearly done; some corn being cut.

Morris.—A good week for corn; plowing for wheat about finished; prospect for winter apples good; grapes and peaches on the market; grapes extra; peaches good crop, but not very good quality.

Neosho.—Plowing for wheat; corn looks well; apples fairly well.

Osage.—The rains have put late corn in fine condition; early corn will make part of a crop; haying not over, a large crop is

crop alfalfa cut and third crop assured; grapes fine and abundant; peaches good but small crop; apples poor; plowing nearly done, ground getting hard.

Harper.—Very favorable week for all farm work; threshing and plowing progressing; much damage reported to wheat in stack; hay and pastures fine.

Harvey.—Haying in progress; threshing resumed; plowing well advanced; all corn, even late, will now fill.

Kingman.—Dry, hot week, very beneficial to wheat in stacks that are wet; threshing progressing slowly; plowing in progress.

Osborne.—Corn is drying up fast; pastures getting very dry, will have to begin feeding soon if no rain comes; too dry to plow.

Ottawa.—Conditions have not changed; the driest period on record for ten years; pastures dry enough to burn.

Phillips.—Dry and hot; corn drying up in central and eastern part of county, in good condition in western; haying nearly done and crop is of fine quality; too dry to plow except in western part; grasshoppers bad on alfalfa.

Pratt.—A very warm week; threshing progressing again, a great portion of the wheat is damaged in the stack by wet weather; wheat fair to good quality, small yield; corn and Kaffir corn good crops; fruits of all kinds fair crops.

Reno.—Hot week; plowing for wheat in progress, with ground in fine condition, a large acreage will probably be sown; corn in clean fields still green and growing, and will make a fair crop, weedy corn drying up and is being cut for fodder; grapes good crop; peaches fair.

Republic.—Tuesday night's rain helped the plowing, and will help the corn some; a larger acreage will be sown to wheat this fall than usual; threshing gives a fair yield of a good quality of wheat.

Russell.—A good heavy rain needed; corn and feed-stuff are drying up rapidly; too dry to plow; corn-cutting, haying and threshing in progress; potatoes a half crop; millet and sorghum a small crop.

Saline.—Hot, dry week; rain badly needed; plowing stopped, ground too hard; corn drying up rapidly, cutting in full progress; pastures drying up.

Sedgwick.—Fine week for corn; pastures excellent; oats fair; apples few, but fairly good; grapes large and fine; hay crop fine; early corn good, later fair, poorly tended light; stock in fine condition.

Smith.—Dry, hot week; corn drying up, has made all it will this season; corn-cutting begun; some wells giving out in central and north part; good rain in south part on 17th; hot wind 19-20th.

Stafford.—A good week for threshing;

Horticulture.

GATHERING AND KEEPING APPLES.

(Condensed from stenographic report of Central Illinois Horticultural Convention.)

Prof. Burrill—On this soil we have not the very best conditions for orchards. There are localities that far surpass us in adaptability for orcharding, and yet we had a big apple crop this year, and the apples were good in quality. There were, it is true, some cases where trees bore heavily last year and failed to bear a full crop this year, but in most cases trees bore well. Now lots of these apples were wasted this year, because they were not properly marketed. On most of the farms the apples have already disappeared, and the very people that sold them will be in want of apples before they grow again, and some of them will pay a big price for them. I expect one reason for these rash sales is that we have not had apples enough to get acquainted with them. When we have had more experience raising apples on a large scale we will do better in the sale of them. There is a cold storage plant in Champaign, and the apples that have been placed there are keeping well now; but they will have little keeping quality when they are taken out. Now, I believe we can, if we will, adapt ourselves to the conditions so that we can successfully raise, keep and sell apples. It will pay us well to properly take care of these apple crops when we do get them. What we want to know first is how to control temperature, for that is the one important thing; not air, not ventilation, not moisture, but temperature. If we can fix it so that we can keep the temperature low enough, we can vary the other conditions, and come out well.

We pick many of our apples by the middle of September, when the weather is warm. What shall we do with them then? We should not cart them off to the cold storage plant, where their keeping quality will be ruined when once they have been taken out of the cold. We must find something that we can provide ourselves. I think that the most practical way that I know is the one that has been suggested here, fixing the storage place so that we can get the use of the cool air of night and exclude the warm air of day, whether the storage place be the cellar or shed or barn or a place made above ground for the purpose. If we can make a house with walls impervious to hot air, pay attention to opening the windows when the air is cool by night or day and closing them when the temperature is high, we will be able to keep our apples. It would have been worth thousands of dollars to the farmers in this vicinity this year could they have held their apples till the market adjusted itself to the known conditions of supply and demand.

Q.—Do you say that the question of dampness is not important?

A.—I said we could vary those conditions. We can afford to have them moist if we can keep the temperature low. You can even keep them in moisture if you have the temperature low enough.

Mr. Johnson—I have heard others say the same thing.

Mr. Riehl—The main thing is low temperature, whether there be moisture or not. Keep them cool. I would rather have them at thirty-two than any higher. I believe that one reason why apples from cold storage plants do not keep well is that they have not been kept cool enough.

Q.—Is a moist cellar a good place in which to keep apples?

Mr. Riehl—It is all right if the temperature be kept low enough.

Mr. Mendenhall—It has been suggested that cooling plants should have cooling rooms with less severity of cold than the room in which the apples are to be finally placed. The apples would be put into these first and so would be gradually cooled off. And when the apples are taken from the plant they could be put into the same room and the temperature gradually raised before taking them into the outer air.

Mr. Wallace—We believe that the spoiling of the fruit that has been in cold storage is caused by the change in temperature. Apples that go into cold storage frequently have a good flavor, but lose it when they have been in cold storage for some time. If they were given the treatment suggested, it might cure that to some extent.

H. Augustin—Get your apples dry, and then get them into cold storage and keep them as cool as you can without freezing. Do not put them up on

the shelves as we used to do, but put them in barrels. There is a difference in keeping an apple from rotting and keeping it in a good condition for eating. If you put a Rawle's Genet on a shelf it will keep, but it will wilt, while if you keep it buried or in a barrel it will both keep and be good for eating.

How to Start in the Pineapple Business.

An old soldier who has settled in the pineapple industry in Florida sends the following interesting directions for starting in the production of this most delicious fruit:

"I have received so many letters of inquiry from all over the country, that I find it impossible to write out a full answer to each one, so I have prepared the following, which covers the main points in the cultivation and growth of this most remarkable fruit—the Florida pineapple. To begin with, I will say that the pineapple can be grown successfully in all of Florida, and the whole gulf region to the westward. To grow the pine successfully you must guard against excessive heat and excessive cold. We thus guard by growing them under cover. Pines, as a rule, do best on low, rich land that will not overflow, and near a lake or stream of water. They will do well also on high land, but as the plant requires plenty of moisture, low land is better. For your Smooth Cayennes, give them the lowest ground in your pinery, the other varieties the highest. Set 8,000 to 10,000 plants to the acre.

HOW TO BUILD YOUR PINERY.

"Cut your posts seven feet long, and set them one foot in ground, in rows nine feet apart, each way. Posts should be three to five inches through. On top of posts lay your 2x6 eighteen-foot joists, running east and west, lapping at ends on top of posts, spiking together and toe-nailing to top of post. On top of joists lay your 1x3 inch slats, eighteen feet long, running north and south, ends lapping, and nailed to joists, every other space being left open. The sides are put on tight, the boards running up and down. This completes your pinery. Cost of material and labor governed by local prices.

HOW TO PREPARE GROUND AND SET OUT PLANTS.

"Lay your ground off and set plants to line in rows both ways 18x24 inches, leaving every eighth long row vacant for walk; also leave space for walk around your pinery outside of plants and next to board fence. A cross walk occasionally is a good idea, and will save you a good many extra steps. With a hoe handle, or anything of the kind, make a hole in the ground at the right point, one and a half or two inches deep, after which set your trimmed sucker in it, pressing the dirt with your two hands around the plant tightly, after which press the dirt hard on its four sides with your feet, being careful not to injure the plant.

"After your plants are set and you are ready to fertilize, I would give them a solution of cottonseed meal and tobacco dust, equal parts. Both are good fertilizers; tobacco keeping away insects. Before putting liquid on, first run around plant with the toe of your boot, making a sort of saucer to hold the liquid. Fill cavity full and let it soak to roots, after which, and before sun burns your cottonseed meal, run through with scuffle-hoe or rake, filling cavity, thus covering fertilizer. We now consider your plants under good headway for growth, but your work is not done. They need much attention. Don't spare fertilizer or the scuffle-hoe. Stable litter, cow penning, decayed vegetable matter of any kind, muck, mulch, all is good. But a month or so before fruiting time I would use blood and bone or potash freely.

"Good, average scions should grow to produce an apple in twelve to fifteen months, with proper care. Each plant will produce an apple. The Golden Queen variety will yield you slips and suckers averaging six or seven to the plant. The Smooth Cayenne about the same. The Abbaka, being more prolific, will give you an average of fifteen to twenty. The quality of fruit in these three varieties are about the same—all first-class—the Queen being earliest and smallest in size, averaging about three pounds each. The Abbaka ripens its fruit next, with the Smooth Cayenne following closely. The last two kinds grow, under favorable conditions, to weigh from six to twelve pounds each. I regard the pineapple industry as being the most profitable, with least danger of loss, of any business you can possibly engage in. The owner of an acre of pines may consider himself as fairly independent in life. The price of scions and fruit fluctuate so much I will not attempt to quote them."

- ARMSTRONG & MCKELVY Pittsburgh.
- BEYMER-BAUMAN Pittsburgh.
- DAVIS-CHAMBERS Pittsburgh.
- FAHRESTOCK Pittsburgh.
- ANONOR Cincinnati.
- ROKSTAD
- ATLANTIC
- BRADLEY New York.
- BROOKLYN
- JEWETT
- ULSTER
- UNION
- SOUTHERN Chicago.
- SHIPMAN
- COLLIER
- MISSOURI St. Louis.
- RED SEAL
- SOUTHERN
- JOHN T. LEWIS & BROS CO Philadelphia.
- MORLEY Cleveland.
- SALEM Salem, Mass.
- CORNELL Buffalo.
- KENTUCKY Louisville.

National Lead Co., 100 William St., New York.

IF YOU want to get the best results in painting use Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil, and give your painter time enough to apply it properly. It will pay.

If any shade or color is desired it can be easily produced by using the National Lead Company's Pure White Lead Tinting Colors and Pure White Lead.

Pamphlet containing sample shades, and giving directions for mixing and applying, sent free upon application.

Strawberries Must Make Blossom Growth in the Fall.

Here is an experiment in strawberry culture, and it is through experiments in a small way that we gain knowledge. I have thirteen plants growing on a four-foot terrace—that is, there are thirteen bunches of plants ranging from one plant to four or five, planted two feet apart, which had been planted with a "long-handled shovel" with all the earth attached. These had been planted last July and were planted for the purpose of obtaining early berries. The terrace sloped to the south. After they were planted we had no rain for three months, and I mulched and watered so as to save them from a premature death. Twelve of the plants were Michel's Early, hermaphrodites; one was a seedling of my own growing, a pistillate. This pistillate was very early, large and fine, and the only plant of its kind that I had.

Because of not having for three months a single good soaking rain these plants made no growth—not a single runner was put forth. Their lives were saved only. The first week in October the rains came and they grew a little, about enough to strengthen them for the winter's battle with the cold. In November the land was frozen and they were covered with hay. In February I removed the hay just over the plants and stretched over the whole terrace an oiled plant-bed muslin cover, which would keep the plants warm and keep snow and ice away from them, so that if they bloomed the bloom would not be killed, and in this way would have early berries.

Of the thirteen bunches of plants, three only bloomed, and one plant only to a bunch threw up a flower stem, so this experiment showed conclusively that the strawberry plant requires late summer's growth and must make blossom growth in the fall. In the "old woman's ten-foot patch" I have noted another item worth recording. Many of the large stools of plants this spring blossomed profusely, and I thought that I would have a fair crop after all. But most of the bloom blasted—not from frost, for we had no late frosts the past spring, but because the plants had not the fall growth which would have enabled them to make fruit. If I had fertilized them they might have done better. I gathered a few berries from those plants which gave that great wealth of bloom. The earliest bloom only fruited and made fine large fruit; the great balance of bloom failed to materialize. —F. K. Steele, Jefferson Co., Mo., in Gardening.

Shipping Apples Across the Ocean.

Editor Kansas Farmer:—It may be of interest to the readers of the Farmer to know something regarding the marketing of Tasmania apples in the English markets during the past season, which closed about July 1. London is the chief market center for the Australian fruit. This fruit is transported in cold storage chambers arranged on the large passenger and freight boats plying between Melbourne and London. Experiments to determine best methods of cold storage have been carried on for some time by these steamship lines until very satisfactory results have been obtained. Mr. John Lowe, of the reliable commission firm of Northard & Lowe, 33 Tooley St., London, with whom the writer has had a personal acquaintance for some time, writes: "We have just finished a very successful Tasmania apple season. The apples have made

enormous prices. The cases contain from thirty-six to thirty-eight pounds of apples, and they have been making from 13s. to £1 (\$3.16 to \$4.86) per case. These sorts of prices would make your growers feel happy. Tasmania apples have been coming in a most perfect condition—never been better. Apples like the 'Emperor Alexander,' which is, as you know, the most tender variety to ship, have arrived here after forty-two days passage, absolutely perfect, not a blemish on them."

The above opens up a question of interest to the Kansas fruit-grower and shipper that seems worth noting. The present low freight rates to London makes it possible and practical to market Kansas apples abroad in times of a heavy crop at home and a corresponding shortage in Europe. The possibilities of improvement in our present cold storage and fast transportation make the question worthy of consideration.

E. E. FAVILLE.

Kansas Experiment Station.

If you have any disease due to impure or impoverished blood, like scrofula, salt rheum, dyspepsia, or catarrh, you should take Hood's Sarsaparilla and be promptly cured.

Hood's Pills are easy to take, easy to operate. Cure indigestion, biliousness, 25 cents.

ST. JOSEPH, MO.

OLD : FASHIONED : FAIR.

August 22, 23, 24, 25, 26, 27.

THE GREATEST OF THE YEAR.

Send for Premium List Now Ready. Liberal Premiums in All Departments.

Best Mile Track. Ample Accommodations. Fair Treatment.

PALMER L. CLARK, Secretary.

Have You Read These Books?

They are devoted to the wonderful sights and scenes, and special resorts of tourists and health-seekers in the GREAT WEST.

Though published by a Railway Company,

THE SANTA FE ROUTE,

they are literary and artistic productions, designed to create among travelers a better appreciation of the attractions of our own country.

Mailed free to any address on receipt of postage, as indicated:

- "A Colorado Summer," 50 pp., 80 illustrations. 3 cents.
- "The Moki Snake Dance," 56 pp., 64 illustrations. 3 cents.
- "Grand Canon of the Colorado River," 32 pp., 15 illustrations. 2 cents.
- "Health Resorts of New Mexico," 80 pp., 31 illustrations. 2 cents.
- "Health Resorts of Arizona," 72 pp., 18 illustrations. 2 cents.
- "Las Vegas Hot Springs and Vicinity," 48 pp., 39 illustrations. 2 cents.
- "To California and Back," 176 pp., 176 illustrations. 5 cents.

W. J. BLACK, G. P. A., A., T. & S. F. Railway, Topeka, Kas.

In the Dairy.

Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kas., to whom all correspondence with this department should be addressed.

The Town Cow.

I have a three-year-old Jersey that gives twenty-six pounds of milk a day, and the milk tests by the Babcock tester 7.3 per cent butter fat. The last calf is nine months old and the cow is due to calve in three months. Pasture in daytime and feed one quart each bran and chop twice a day. A little new prairie hay at night. How would this cow be rated from a dairy standpoint? Easy milker, good size for breed, good temper, etc. Would it be feasible and safe to try to increase the flow of milk, say 50 per cent., after next parturition? About what amount of grain could be considered a desirable ration with sorghum hay ad libitum for this cow?

Arkansas City, Kas. G. E. H.

If you want to get the best returns from your cow you must carefully dry her up two months before calving. Feed her light feeds and keep her bowels loose until after she calves. After she has recovered from calving, slowly increase her feed until at the end of six weeks she has all she will eat up clean twice daily. As to how much this will depend so much upon the individual that we cannot advise. I give below a few suggestions for twenty-four hour rations, using sorghum hay as you suggest:

1. Sorghum hay fifteen pounds, bran 5 pounds, cottonseed meal 3 pounds, linseed meal 3 pounds, ground oats 2½ pounds.
2. Sorghum hay 15 pounds, bran 8 pounds, cottonseed 4 pounds, oats 2½ pounds.
3. Sorghum 20 pounds, bran 7½ pounds, cottonseed meal 4 pounds.
4. Sorghum hay 15 pounds, bran 6½ pounds, linseed meal 4 pounds, cottonseed meal 4 pounds.
5. Sorghum hay 15 pounds, cottonseed meal 4 pounds, linseed meal 3 pounds, bran 6 pounds, corn meal 3 pounds, ground oats 3 pounds.

With the yield the cow is giving now she should give 400 pounds of butter next year. A variety of rough feeds will give better results than sorghum alone. If you had alfalfa hay you could reduce the amount of grain needed by at least one-half. A variety both in roughness and grain will secure a higher yield than the same amount of food with little variety, and the more palatable the feed the greater the yield. H. M. C.

Riley County Milk Yield.

Mr. J. F. Swingle, Manhattan, Kas., sends us the record of his herd for the year ending May 10, 1898. Mr. Swingle sent his milk to both cheese factory and creamery at Manhattan. He writes as follows:

"At the commencement of the year I had eleven cows and at the close thirteen. I suppose twelve would represent the average number of cows, counting good, poor and everything that I milked; one was a two-year-old heifer and one had only three teats. I was unusually unfortunate, I think, with my calves; I lost three with 'white scours' and one cow had an abortion. Neither, I think, was caused by my dairying, but would probably have happened the same if the calves had run with the cows. The calves would probably sell for an average of \$15 apiece. They are not for sale, as I keep them till they are mature before selling. During the summer the cows ran in a prairie pasture and I fed them no grain. During the driest part of the summer season I fed some alfalfa when they were driven home at night. During the winter I fed them principally corn chop mixed with bran, in proportion by bulk 3 to 1, and some sheaf oats of rather poor quality, as much as they would eat up clean, straw and all, and corn fodder as much as they would eat up clean. I also tried feeding a little oil meal and corn chop mixed, but concluded it was more economical to feed bran and went back to bran. I was not feeding it to get the largest amount of milk, but just simply to keep the cattle in a thrifty condition. I have made no account of the milk returned from the factory or creamery, and of course you have but one side of the account, showing the receipts only.

"The income from the sale of milk of twelve cows was \$325.76; eight calves, the produce of the herd, are worth \$120, making the total for the year \$445.76, an average income from each cow of \$27.14 for milk alone, and \$37.14 for milk and calves. Average yield per cow 4,143 pounds of milk, containing 167 pounds butter fat, equivalent to 196½ pounds of

butter. The lowest price received for butter fat was 14 cents per pound, highest price 20 cents, with an average price of 16.2 cents, which equals 19 cents per pound for butter.

Don't Read This--It's Full of Bacteria.

The Agricultural College took three cans of milk, as they came from the barn. The first was left standing in the milk-house without aerating or cooling. The second can was cooled to 62°, and left standing by the side of the first. The third can was treated the same as the second except that after cooling it was placed in a tub of cool water and covered with wet gunny sacks. The next morning samples were taken from each can and submitted to Dr. Fischer, the college bacteriologist, who determined the number of bacteria. The results are shown in the following table:

	Beginning of Experiment.		End of Experiment.		No. bacteria per cubic in.
	Temperature.	Acidity.	Temperature.	Acidity.	
No. 1—Left in milk-house as it came from barn.....	94	.184	75	.206	125,057,972
No. 2—Aerated, cooled and left standing in milk-house..	62	.184	63	.194	24,678,103
No. 3—Aerated, cooled and placed in tub of well water..	62	.204	61	.189	8,837,428

All three cans were sent to the creamery, and although only twelve hours old can No. 1 contained so many bacteria that the creameryman recognized their presence and returned the milk. On examination it was found to be in the condition of sweet curdle, caused by the action of bacteria that grow at a warm temperature and produce a very undesirable flavor in the butter. Any one who has trouble in keeping his milk would do well to ponder the above figures until he feels the bacteria crawling all over him, both inside and outside, and then set about making his milk clean and cool to reduce their number to a minimum. D. H. O.

A Profitable Yield.

Mr. Mat Motes, Prairie Grove stock farm, Scottsville, Kas., is a patron of the Jensen creamery. He writes in regard to his dairy work as follows:

"From the first of March, 1897, to the first of March, 1898, we milked five cows. They were grade Short-horns. We received for our butter fat \$189.61. We delivered 28,490 pounds of milk, of which we got back as skimmed milk 90 per cent. in value and that at 10 cents per hundred.

"I raised five calves and sold two of them for \$20 apiece when they were eleven months old, and could have sold the others for that money but I have decided to keep the heifer calves. I delivered by own milk. We made the best test in the winter by feeding oats. We herded the cows in corn stalks during the day, fed a little alfalfa hay at night and stabled our cows in bad weather.

"Cash receipts from sale of milk, \$183.61. The value of calves at weaning time, \$60. Total income from five cows \$243.61, an average of \$48.72 per cow per year. The five cows gave 28,490 pounds of milk, containing 1,090 pounds of butter fat, making the average yield for the year per cow of 5,698 pounds of milk and 218 pounds of butter fat—equal to 256 pounds of butter. The average butter fat was 3.8 per cent.

A Blue Ribbon Record.

Mr. N. H. Gilfillan sends us the record of his four cows. His cows are grade Short-horns. In the winter months he feeds corn fodder, Kaffir corn, alfalfa hay, bran and corn meal, and also feeds a small amount of corn meal all summer in the stable. For the year ending October 31, 1897, Mr. Gilfillan sold to the Jensen Creamery Company, at Beloit, from his four cows 34,728 pounds of milk, which contained 1,335.5 pounds of butter fat, and for which he received \$206.08. He raised four calves, and from May 1 fed the skim-milk to his hogs. His account stands as follows:

Sale of milk.....	\$206.08
Cash for calves.....	60.00
16,000 pounds skim-milk fed pigs.....	16.00
Total income from four cows.....	\$282.08
Average income for the year per cow..	70.52

This record shows an average yield of 3.85 per cent. butter fat and an average yield per year per cow of 8,682 pounds of milk and 333.9 pounds of butter fat—equal to 393 pounds of butter. The results obtained are due to close attention, proper stable room, and regular hours for feeding and milking.

It is needless to say that Mr. Gilfillan is satisfied that dairying pays. He is raising his heifers and expects soon to milk twelve cows of his own raising.

The total number of tubs of butter received at Omaha on first call was 78. Thirty of these came from Kansas, which was the largest number from any one State.

Meriden Creamery, Meriden, Kas.

Mr. John Lounberg is President of this company, L. A. Sherrard, Vice President and Treasurer, and F. S. Hurd, Secretary and manager. Mr. Hurd is also Secretary and Treasurer of the Kansas State Dairy Association. The creamery of this company is at Meriden, with skimming stations at Cummings, McLouth, Osawkie, Valley Falls and Boyle. Mr. A. M. Larsen, a graduate of the Iowa Dairy School, is butter-maker. The Meriden creamery has 420 patrons, received in 1897 7,952,903 pounds of milk, from which 351,242 pounds of butter were made, and for which the patrons received \$62,421.75. This record shows an average for the year of 22.6 pounds of milk for each pound of butter, and an average of 3.75 per cent. butter fat. The Meriden creamery is one of the most progressive in the State, with both offi-

cers and patrons on the alert for improvement.

Both Were Good Talkers.

"I was 'shipmates' with 'Fighting Bob' Evans when he was a commander," said the old sailor, who is now a messenger in the Navy department, "and he is now, and always has been, for the matter of that. He had a pretty moving line of talk—I don't mean soft and pathetic, but just lifting—when he had a hard nut up before him at the stick, and he knew English when he was a commander just as well as he does now that he's a four-striper. He wasn't what I'd call a cussing skipper, but he'd let out once in a while and say more original ones that stuck, too, throughout the entire service. He knew how to appreciate a good command of sinewy Anglo-Saxon talk on the part of other folks, too, and the way he handled old Bumboat Kate showed it.

"Bumboat Kate lived in Vallejo, across from the Mare Island navy yard, and she got rich bringing her small gear off to the ships lying at the yard docks. She was an extortionate charger, but the blue-jackets stood for her heavy prices for the sake of blarneying her and listening to her humorous talk. She could get it in for a blue-jacket that she didn't like and make him feel like a beach-comber with her tongue when she got ready, and no naval sailor who had one encounter of this sort with Bumboat Kate hankered for another experience.

"My ship, with 'Fighting Bob' as the commander—this was a good many years ago—was lying alongside the Mare Island navy yard dock, and Kate was bumboating her. A lot of the quarantined men—fellows deprived of liberty and kept aboard for misconduct—were getting rum somehow or another, and turning up at quarters and drills in a pretty wobbly state. There was no accounting for the way they got their liquor.

"The steam cutter was overhauled every time she came off the ship, and all hands were searched when they returned from liberty, but no smuggled liquor was found, and the mystery grew pretty deep. Then it began to be suspected that Bumboat Kate was the rum smuggler, and a secret investigation was started. The officers in charge of the investigation fastened the liquor smuggling on to Kate beyond a doubt, and Commander Bob sent forward for her one morning and told her, when she appeared in the cabin, that she was not to be permitted to bumboat the ship any longer, and was not, in fact, to be henceforth allowed to come aboard the ship at all.

"The old woman became enraged over

CREAM • SEPARATORS

De Laval "Alpha" and "Baby" Separators. First—Best—Cheapest. All Styles—Sizes. PRICES \$50 TO \$800. Save \$10 per cow per year. Send or Catalogue THE DE LAVAL SEPARATOR CO. Randolph & Canal Sts., CHICAGO. 74 Cortlandt Street NEW YORK.

this, and, letting caution slide, she boldly told Evans that she had smuggled the liquor, and she produced from beneath her shawl a dirty bag, filled with gold, which she said she had made in selling the smuggled rum to the quarantined blue-jackets.

"Then she began to let out on Commander Bob. He sat in an easy chair in his cabin, twiddling his thumbs and taking it in. She started the skipper off as a middy and punctured his whole career. She bombarded him for every year of his life with her terrific line of roasts, and he sat smilingly through it all. She shook her withered old fists in his face, and she called him every old thing in English and Milesian that she could think of. Commander Evans took out his pen-knife and began to trim his nails, and still the old harridan went on. There was a grin of eminent satisfaction on the skipper's countenance—so the marine orderly at the cabin door told us afterward—and he didn't try to work in a word. The old woman finally, after fifteen minutes of steady roasting, became hoarse and wound up with a blithering peroration. Then she started for the cabin door to leave.

"Oh, I say, Kate," said Evans, rising from his comfortable chair, "you're not done already, I hope, are you? Why, I thought you were a stayer. You ought to be able to keep it going longer than this. Oh, I say there, Kate—"

"But the old woman, turning around at the cabin door to shake her fist at him, bobbed out, got her wares together and pulled away from the ship.

"When she had gone, Evans strolled out of his cabin with a reflective grin on his face.

"She surely burnt you up, sir," said the marine orderly, who, an old-timer, was privileged.

"Well, she's got a direct way of speaking, if that's what you mean," replied Evans.—Washington Star.

\$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 now 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 \$100 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.

The Continental Limited

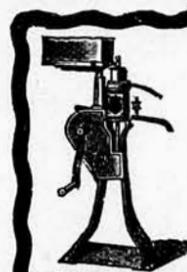
Is the name of the new fast train just put on the Wabash, running through to New York and Boston. The time is the fastest ever made by a high standard, wide vestibuled limited train.

Sleeping car accommodations can be secured through to New York and Boston at the Wabash ticket office, northwest corner Ninth and Delaware street, or wire to HENRY N. GARLAND, Western Passenger Agent, Kansas City, Mo.

The True Keynote of Genuine Education is Individualization.

The elective system at Lombard University adapts the courses to the student's needs—a special course for each special case. Will match on to any preparatory course. PERSONAL ATTENTION DOES THE REST.

A college of highest grade, new, modern buildings, thorough equipment—gymnasium, laboratories museum, athletic field, etc. Preparatory Department, Music, Art, Elocution Schools, Divinity School, College of Liberal Arts. Low cost. Address C. ELWOOD NASH, President, Galesburg, Ill.



The Improved U. S. Cream Separators

In thoroughness of separation take the lead. In completeness of design and ease of operation excel all others. Are more substantially made and are superior in all points to all others. All Styles and Sizes. \$75.00 to \$625.00. Agents in all dairy sections.

Send for latest illustrated catalogues.

VERMONT FARM MACHINERY CO., - Bellows Falls, Vt.

WASHBURN COLLEGE TOPEKA, KANSAS.

A Co-Educational Christian College of high grade. Three full courses of study, leading to degrees. Bachelor of Arts; of Science; of Letters. Preparatory Academic course of three years, leading to Freshman.

Equipment First-class. Beautiful Campus of 160 acres; six fine buildings; Library over 7,000 volumes; Laboratories; Museums; Ladies' Dormitories; Gymnasium.

Instruction Thorough. Fifteen competent professors; many of them specialists in their departments; Courses in Languages, Ancient and Modern; English; Science; Mathematics; History and Political Economy; Elocution and Oratory; Philosophy; Music and Art. Special courses in the study of the English Bible.

Expenses Reasonable. Tuition \$40 per year. Board \$2.00 to \$3.00 per week. Room rent low; no incidentals. Occasional opportunity for self-help.

Situation Ideal. Topeka is reached by four railroads. College is two miles southwest of the center of the city, reached by electric car every twenty minutes. Combines advantage of both city and country.

FALL TERM BEGINS SEPTEMBER 14.

For Catalogue and Information, address
GEO. M. HERRICK, President.

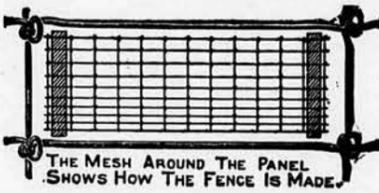
TWO TONS A DAY MORE THAN OTHERS OR NO SALE

THE FINEST PRAIRIE HAY MACHINE IN THE WORLD.

Special Inducements to Readers of This "Ad."



AMERICAN BALER CO., 1205 UNION AVENUE, KANSAS CITY, MO.



PERFECT FARM FENCE Made of best doubly annealed galvanized steel wire. Top and bottom wires No. 9. All other wires No. 11. We use the strongest stay wire in any woven wire fence on the market—hence more strength and durability.

Our **LOOP KNOT** (entirely new, feature, patented) provides perfect expansion and contraction and keeps it tight at all temperatures. Our Loop Knot being uniformly distributed throughout each foot of fence is, in effect, the same as placing one coil of a spiral spring in every foot throughout the entire length of fence.

BESIDES GREATLY STRENGTHENING IT. Our Loop Knots make the fence plainly visible and impossible for stay wire to slip or give. It is Hog tight and Bull strong. Will turn all kinds of stock without injuring them. Where we have no agents a liberal discount will be given on introductory order. Reliable farmer agents wanted in every township. Send for catalogue and prices.

Pittsburg Woven Wire Fence Co., Pittsburg, Pa.

FAIRBANKS' STANDARD SCALES.

—FOR—

Stock, Hay, Coal, Etc.,
Mills, Elevators,
Warehouses.



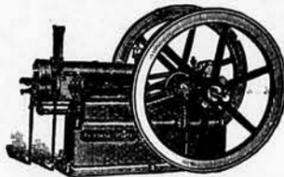
Send for Catalogue.

WINDMILLS.

Eclipse Wood Wheel and Fairbanks' Galvanized Steel FOR PUMPING OR GRINDING.

Towers, Tanks, Water-works and Irrigation Supplies.

Send for Catalogue.



FAIRBANKS-MORSE GAS AND GASOLINE ENGINES.

Especially built for Threshing, Pumping, Grinding and general services. Estimates made and complete plants installed.

FAIRBANKS, MORSE & CO.,
1217-19 Union Ave., KANSAS CITY, MO.



\$145.00—All Steel, Full Circle Hay Press; three day trial. Plows, Cultivators, Wagons, Buggies, Harness, Scales, Sewing Machines, etc. Send for illustrated catalogue; free. Farm Implement Supply Co., Winona, Minn.

BALE YOUR HAY

It will keep better, sell better and save room. Rats and mice can't eat and destroy baled hay. The best and most rapid machine for baling purposes is

"ELI" BALING PRESS. Made in 28 styles and sizes to suit every case. All steel, light, strong, lasting. Write for free illustrated catalogue. COLLINS PLOW CO., 1120 Hampshire St., QUINCY, ILL. Mention Kansas Farmer.

The American Steel Tank Co. is making the same high grade Tanks, all shapes and sizes. If you are interested, write for prices and catalogue "A."

FARMERS' STOCKMEN, CREAMERY, DAIRY AND SHEEP-DIPPING TANKS
AMERICAN STEEL TANK CO.,
3119 West Eighth St., Kansas City, Mo.

Elegant Sewing Machines Buy direct Get the best. At factory prices. Warranted 10 years; all attachments for fancy work. No money in advance. **FREE 60 day trial.** The Elegant *Alvaha*, \$19.50 to \$24.50; regular price, \$30 to \$40. The Handsome, Durable *Argyle*, \$16.50 to \$19.50; regular price, \$24 to \$30. The *Singer Models*, \$8.25. Send for large catalogue before you buy, and save money. Address **P. ELY MFG. CO., 391 State St., Chicago, Ill**

BLACK LEG

PREVENTED BY

PASTEUR "VACCINE."

Write for particulars, prices and testimonials of thousands of American stockmen who have successfully "vaccinated" their stock during the past three years in Dakota, Nebraska, Wyoming, Colorado, Kansas, Texas, etc.

PASTEUR VACCINE CO., 52 Fifth Avenue, CHICAGO.



THE KANSAS CITY STOCK YARDS

—ARE THE—
FINEST EQUIPPED, MOST MODERN IN CONSTRUCTION AND AFFORD THE BEST FACILITIES

For the handling of Live Stock of any in the World.

THE KANSAS CITY MARKET

Owing to its Central Location, its Immense Railroad System and its Financial Resources, offers greater advantages than any other in the Trans-Mississippi Territory. It is the Largest Stocker and Feeder Market in the World, while its great packing house and export trade make it a reliable cash market for the sale of Cattle, Hogs, and Sheep, where shippers are sure to receive the highest returns for their consignments.

	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1897	1,921,962	3,350,796	1,134,236
Sold in Kansas City 1897	1,847,673	3,348,556	1,048,233

C. F. MORSE, Vice Pres. and Gen. Mgr. E. E. RICHARDSON, Secy. and Treas. H. P. CHILD, Asst. Gen. Mgr. EUGENE RUST, Traffic Manager.

Superiority Under all Conditions

Has won the favor and approbation of all riders who have purchased

Columbia Bevel-Gear Chainless Bicycles, \$125.

It is generally admitted by them that the Columbia Bevel-Gear Chainless is over a mile faster in the hour on ordinary roads than chain wheels, and that it has 10% advantage in hill climbing.

Rides Easily, Smoothly and Silently.

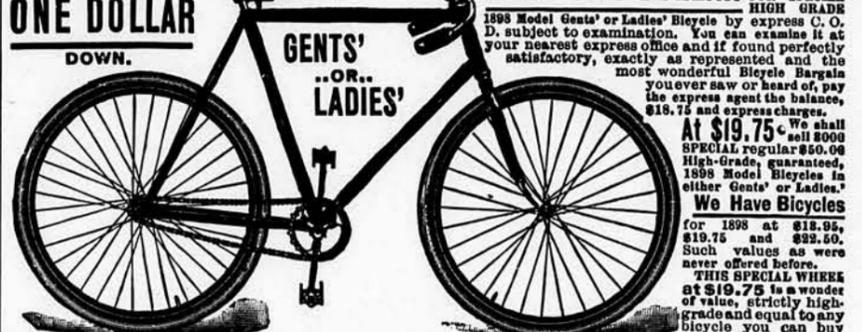
COLUMBIA CHAIN WHEELS,	-	-	\$75
HARTFORD BICYCLES,	-	-	50
VELETTE BICYCLES,	-	-	\$40 AND 35

POPE MFG. CO., Hartford, Conn.

Culver & Bailey, Columbia Dealers, Topeka, Kas.

ONLY ONE DOLLAR DOWN.

SEND ONE DOLLAR



and we will send you this OUR SPECIAL HIGH GRADE 1898 Model Gents' or Ladies' Bicycle by express C. O. D. subject to examination. You can examine it at your nearest express office and if found perfectly satisfactory, exactly as represented, and the most wonderful Bicycle Bargain you ever saw or heard of, pay the express agent the balance, \$18.75 and express charges.

DESCRIPTION. OUR SPECIAL 1898 Bicycle now offered at \$19.75 is made from the very best material found only in the highest grade wheels. FRAME is 24 inches deep, true diamond, (Ladies' is 22 inches, curve shape with two center braces) 1 1/2-inch highest grade imported German seamless tubing. FORK CROWN, drop forged, highly polished and finished and nickel-plated. HANDLE-BARS, very latest and best wood or nickel, up or down curve or ram's horn. WHEELS, highest grade, 28-inch. SPOKES, highest-grade, 14-16 swaged. HUBS, latest large tubular, turned from bar steel. RIMS, highest grade non-warpable wood. TIRES, our own special guaranteed strictly high-grade single plated. PEDALS, handiest and best rat trap. BEARINGS, highest grade tool steel, highly finished. SPROCKETS, finest forgings, heavily nickel-plated, detachable. SADDLE, strictly high-grade, padded. Weight, 25 lbs. Full ball bearing with ball retainers throughout. Finished in the highest possible enamel in blue, black or maroon, and shipped complete with tool bag, pump, wrench, oiler and repair kit.

OUR GUARANTEE. We issue a written binding, one year guarantee, during which time if any piece or part gives out, by reason of defect in workmanship or material, WE WILL REPLACE IT FREE OF CHARGE. With care the bicycle will last 10 years.

SEND US ONE DOLLAR State whether Ladies' or Gents', kind of handle bars and color of finish, and we will send you the bicycle by express C. O. D. subject to examination, and such a bargain as you never saw before, pay the express agent the balance, \$18.75, and express charges. OUR FREE BICYCLE CATALOGUE shows a complete line of bicycles at \$12.95, \$19.75, \$22.50, etc. Also a full line of bicycle sundries, bicycle clothing, etc. **SEND FOR IT.** We refer to the publishers of this paper, our customers everywhere, Metropolitan Nat'l Bank, Nat'l Bank of Republic, Bank of Commerce, Chicago; German Exchange Bank, New York; any business house or resident of Chicago. We occupy entire one of the largest business blocks in Chicago, employ 700 people, and we guarantee to save you \$20.00 to \$20.00 on a high-grade bicycle. Order to-day. Don't delay. Only \$,000 to be sold at \$19.75.

SEARS, ROEBUCK & CO., (Inc.) Fulton, Desplaines and Wayman Sts., CHICAGO. (SEARS, ROEBUCK & Co. are thoroughly reliable and for \$19.75 this is surely a wonder bicycle.—Editor)

In writing mention Kansas Farmer.

The Veterinarian.

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

WARTS.—I have a young mule that has warts. It has been two or three months since they first appeared. They are raw and bloody. A. N. W. Taw, Kas.

Answer.—How large are these warts? How many are there? On what part of the body do they appear? I must know this before I can intelligently prescribe.

COLDS.—Some of my sheep seem to have caught cold and are running at the nose. What is the remedy for it? Golden, Kas. B. C. L.

Answer.—Take black sulphate of antimony, pulverized sage, pulverized Juniper berries, of each 4 ounces, and mix. Mix this with a half bushel of ground oats or other ground grain and give each sheep a pint of the mixture once or twice daily for a few days. Don't forget to salt your sheep and shelter them when the weather indicates it.

WARTS.—One of my yearling Western steers is having a great growth of warts on his head and neck. They average about the size of the end of one's finger and extend from near the eye along the side of head below ear on to neck. What treatment should I give it? Is it contagious? I think they are beginning to come out on another. Kinsley, Kas. C. W. J.

Answer.—Please describe the warts a little more in detail. I am afraid it may be something else. Write again and mention their form, size, thickness, and anything else peculiar to them, whether they are smooth or rough, etc. Ordinary warts are not serious and usually disappear of their own accord.

SWEENEY.—I have a valuable young mare, which a man took to break this spring. He told me a few days ago that her shoulder was sweeneyed. He don't know how it got done. She has not pulled or worked hard. The trouble is not of long standing. She is 5 years old and has not been worked until this spring. I. B. M. Green Ridge, Kas.

Answer.—So-called sweeney is another name for atrophy or wasting of the shoulder muscles. This can be produced in various ways. The commonest cause is some chronic painful affection of the lower parts of the limbs (hoof or joint diseases). This painful affection causes the animal to favor its limb, and the comparative inactivity attending this results in atrophy of the muscles. It is more than probable that your animal's feet are affected; possibly the "sweeney" might have been caused by an ill-fitting collar. At all events, have her fet carefully examined and report to me any trouble that you may succeed in locating. See that the collar fits.

LAME HORSE.—My horse is very lame in his left fore foot, occasioned by "pawing" in his stall. I can find no tenderness to pressure applied to any part of foot. When he stops he throws the foot forward, resting it on the point of the toe. If in setting his foot down his toe rests on anything he will flinch before the heel strikes the ground. I applied to a veterinarian, and he gave me a preparation to blister the foot above the hoof. It did it effectually, but with no good result. I have feared there may be a nail in the bottom of foot. Would you advise the removal of frog and exploring that part of foot? It has been pared carefully elsewhere. Junction City, Kas. R. W. S.

Answer.—I cannot give you much advice here. Most cases of lameness require a very minute and careful personal examination before they can be diagnosed. To judge from the facts you have given, a nail in the foot is probably at the bottom of the whole trouble. Poutice the foot for a few days with a linseed meal poultice, having a little carbolic acid added to it. As soon as the horn softens somewhat, make a careful examination, cutting the horn of the sole away liberally; pay especial attention to the line of union between the sole and hoof wall and the crevices at either side of the frog; but do not trim away any more of the frog than is necessary. If you succeed in finding the nail, remove it carefully and then inject, with a syringe, a 5 per cent. solution of creolin or a 4 per cent. solution of carbolic acid into the cavity, and

bandage the hoof with dry cloths, repeating the disinfection and bandaging process twice daily. If you cannot find evidence of a nail prick, write again.

HORSE OUT OF CONDITION.—I have a three-year-old black horse, which was in very good flesh in the spring. I worked him and he got very poor. He always wants to go too fast. Now and then he coughed a little early in the spring. During the last couple of weeks he has been running at the nose a little and coughing a little more, as though his throat were full of slime. Have not worked him for nearly two weeks. Fed him heavily on soaked corn during harvest. Now I have left off the corn and feed him oats and bran, alfalfa hay and pasture, also prairie pasture. Sometimes he runs in wheat stubble, eating some wheat, I suppose. I fed him powders. He has been eating well until the last few days, during which he has not eaten so well at some meals. His ears seem not so warm as they should be. Monitor, Kas. J. S.

Answer.—Feed your horse alfalfa hay and oats. Give one tablespoonful of the following mixture three times a day: Take sodium bicarbonate 3 ounces, powdered Juniper berries 2 ounces, powdered anise seed 2 ounces, and mix. Let him run on pasture or give him light work.

HOGS DIE SUDDENLY.—A number of my hogs suddenly took sick last night after feeding, and out of ten sick ones eight died during the night. They had been fed slop consisting of water and whey, followed by green corn fodder with considerable nubbins in it, which had been cut in the morning. To-day at noon I fed slop and sparingly of the green fodder with the nubbins removed, and within ten minutes two shoats were reeling and staggering and soon died after a short struggle. They would first appear to cramp in hind quarters and throw their heads back and soon would go down, some dying within ten minutes and some lingering for twenty-four hours. These hogs had been fed on green corn for some time without any bad results whatever until last night. We had a soaking rain day before yesterday, which was the end of a long-continued drought, and I thought that possibly this might have affected the growth of the corn in some manner injurious to feeding stock. If you can throw any light on the subject through the columns of the Kansas Farmer I shall be greatly obliged. W. K.

Answer.—It is entirely possible that the weather has affected the growth of the corn in such a way as to make it injurious stock food. Cases like this are often observed, but cannot always be explained.

SEVERAL INQUIRIES.—(1) I have a cow which had a sore head from dehorning. She was dehorned a year ago last fall. It healed up all right, but in the spring one side got sore and broke and ran for a few days and then it healed up all right. But last February she got to ailing and ran down in flesh. She would go off from the other cattle and lie down and stretch out, or she would scratch the side of her head or stand with her head against a post. She was ailing until about the first of April. I could not see that there was anything wrong with her head. Some time in June she commenced ailing again and a small lump formed, just below the horn, the size of a green walnut, and then the horn broke and ran for a week or so. It is healed up now but the lump is still there. She has a calf now and is in good order. What shall I do if it gets sore any more? (2) I have a male hog that has been constipated for about three months. For about three weeks he has been off his feed. He is getting a little green corn now. He strains a good deal but does not pass much. I fed him oil meal for a while, but it did not seem to do him any good. He is a large hog, 2 years old. (3) Can a bony growth just above the hoof on a mare 5 years old be taken off? It came when she was 2 years old. She was quite lame for a year or so, but is not much lame now. Sometimes it does not bother her at all. Have ridden her and driven her to the spring wagon for a year, but not hard. (4) I have a cow that has been stiff for about two weeks. The trouble seems to be chiefly in her front parts. She persists in lying down, but eats well and gives about the same amount of milk as before. W. H. S. Haskell, Kas.

Answer.—(1) This was an abscess, due to improper care of the wound resulting from the removal of the horn. The lump that you describe as still being present is probably a new abscess in the process of formation. If it should trouble her again, then examine this swelling carefully and open it with a sharp, clean knife at the point where

it seems to offer the least resistance. A quantity of pus will no doubt be discharged. The cavity should be washed twice daily with a 4 per cent. solution of creolin in water. Use a syringe to inject the fluid. Use the creolin solution liberally and see that not only the cavity, but also the surrounding skin, is kept perfectly clean. The latter should have all hair trimmed away for a distance of an inch in every direction. Keep this treatment up until the cavity heals. Make up your mind in the beginning to keep up the treatment and not lose patience. The treatment of a case like this would try a saint. Once properly healed it will cause no more trouble. (2) Constipation.—Give your hog 3 ounces of castor oil mixed in a few pints of fresh milk. (3) This is a ring-bone and cannot be removed. Your animal may recover without any treatment whatever, but the case is rather doubtful. (4) Examine lame feet carefully and remove any dirt that may have accumulated between the claws. If the feet are unusually warm to the touch wrap them in pieces of gunny-sack soaked in cold water and change the cloths every two or three hours. An abscess may possibly form between the claws; this must then be opened with a sharp, clean knife and treated with a 3 per cent. carbolic acid solution, three times daily. Let the animal stand on a soft dry floor.

MARKET REPORTS.

Kansas City Live Stock.
Kansas City, Aug. 22.—Cattle—Receipts since Saturday, 7,009; calves, 572; shipped Saturday, 1,842 cattle, 51 calves. The market was slow and steady to 10c lower. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price.	No.	Ave. Price.
16.....	1,288 \$5.05	7.....	1,282 \$5.00
41.....	1,289 4.90	12.....	923 4.90

WESTERN STEERS.			
No.	Ave. Price.	No.	Ave. Price.
6 La.....	923 \$4.05	40.....	1,285 \$4.40
96.....	1,111 4.15	103.....	1,090 4.00
66 fdrs.....	792 3.90	112.....	1,100 3.82½
175 T.....	1,056 3.70	20 stk.....	560 3.25

NATIVE COWS.			
No.	Ave. Price.	No.	Ave. Price.
5.....	1,112 \$3.65	3.....	1,150 \$3.60
2.....	1,180 3.45	9 o & h.....	881 3.30
7.....	718 3.10	3.....	973 2.75
2.....	900 2.50	2.....	985 2.25

NATIVE FEEDERS.			
No.	Ave. Price.	No.	Ave. Price.
26.....	1,168 \$4.35	6.....	951 \$4.25
3.....	1,046 4.25	21.....	1,151 4.10
21.....	1,159 4.10	1.....	1,260 4.00

NATIVE STOCKERS.			
No.	Ave. Price.	No.	Ave. Price.
31.....	523 \$4.85	20.....	607 \$4.75
11.....	679 4.65	5.....	740 4.45
14.....	543 4.35	8.....	786 4.20
12.....	855 4.00	2.....	740 3.50

Hogs—Receipts since Saturday, 2,594; shipped Saturday, 411. The market was steady to 5c lower. The following are representative sales:

15... 277 \$3.80	76... 213 \$3.77½	183... 232 \$3.77½
69... 255 3.77½	37... 251 3.75	74... 253 3.75
86... 321 3.75	58... 251 3.75	79... 287 3.75
67... 266 3.75	67... 234 3.75	66... 245 3.75
108... 285 3.75	69... 277 3.75	77... 222 3.72½
77... 198 3.72½	48... 334 3.70	44... 235 3.70
73... 253 3.70	84... 202 3.70	90... 182 3.70
15... 188 3.70	163... 199 3.70	63... 215 3.70
71... 208 3.70	50... 212 3.67½	17... 232 3.65
31... 148 3.65	73... 197 3.62½	14... 138 3.55
12... 265 3.45	8... 135 3.45	2... 235 3.25
1... 96 3.00	48... 66 2.75	

Sheep—Receipts, since Saturday, 4,709; shipped since Saturday, 8,297. The following are representative sales:

123 C. lms.....	57 \$5.25	10 sw. lms...	57 \$5.00
15 stk. lms....	48 4.50	11 sw. sh.....	87 4.10
1,176 Utah.....	103 4.15	316 K. stk.....	62 3.70
8 fdrs.....	8 3.85	3 stk. lms...	36 3.50

Chicago Live Stock.
Chicago, Aug. 22.—Cattle—Receipts, 22,000; market generally 10c lower; beefs, \$4.20@5.55; cows and heifers, \$2.00@4.75; Texans, \$3.25@4.30; westerns, \$3.70@4.65; stockers and feeders, \$3.40@4.70.

Hogs—Receipts, 32,000; market slow, light hogs a shade lower and others 5 to 10c lower; light, \$3.60@4.40; mixed, \$3.60@4.00; heavy, \$3.55@4.00; rough, \$3.55@3.70.

Sheep—Receipts, 18,000; market weak, mostly 10 to 15c lower; natives, \$2.90@4.50; westerns, \$3.60@4.40; lambs, \$3.75@4.15.

St. Louis Live Stock.
St. Louis, Aug. 22.—Cattle—Receipts, 3,200; market quiet; native shipping steers, \$4.30@5.40; stockers and feeders, \$2.75@4.60; cows and heifers, \$2.00@4.50; Texas and Indian steers, \$3.15@4.20; cows and heifers, \$2.50@3.25.

Hogs—Receipts, 2,500; market slow and weak; yorkers, \$3.80@3.90; packers, \$3.85@3.95; butchers, \$3.90@4.00.

Sheep—Receipts, 3,000; market steady; native muttons, \$3.00@4.25; lambs, \$4.00@6.20; Texas feeders, \$3.75.

Chicago Grain and Provisions.

	Aug. 22	Opened	High'st	Low'st	Closing
Wh't—Aug....	60½	67	66	66	66
Sept.....	62½	63½	62½	63	63
Dec.....	61½	62½	61½	61½	61½
Corn—Aug....	29½	29½	29½	29½	29½
Sept.....	29½	29½	29½	29½	29½
Dec.....	30	30	29½	29½	29½
Oats—Aug....	19½	19½	19½	19½	19½
Sept.....	19½	19½	19½	19½	19½
May.....	22	22½	22	22	22½
Pork—Sept....	8 92½	9 00	8 90	8 95	8 95
Oct.....	8 90	8 90	8 80	8 85	8 85
Dec.....	8 87½	8 95	8 85	8 85	8 85
Lard—Sept....	5 07½	5 07½	5 00	5 00	5 00
Oct.....	5 12½	5 12½	5 05	5 05	5 05
Dec.....	5 17½	5 17½	5 10	5 10	5 10
Ribs—Sept....	5 10	5 12½	5 00	5 05	5 05
Oct.....	5 10	5 12½	5 02½	5 07½	5 07½
Dec.....	4 92½	4 92½	4 87½	4 87½	4 87½

Kansas City Grain.
Kansas City, Aug. 22.—Wheat—Receipts here to-day were 588 cars; a week ago, 482 cars; a

Horse Owners! Use
GOMBAULT'S
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 all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or damage. 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.

20,000
Peerless Mills in Use
Unrivalled in capacity and quality of work. Will grind ear corn and all grain to any degree of fineness. Will make family meal or feed. AGENTS WANTED. Prices \$15, \$18, \$20. Send for free circulars & agency. STEVENS MFG. CO. Box 18, Joliet, Ill.

year ago, 933 cars. Sales by sample on track: Hard, No. 1, 63½@63¼c; No. 2 hard, 60½@63c; No. 3 hard, 57½@62c; No. 4 hard, 55@61c; rejected hard, 45@55c; no grade, 48½@52¼c. Soft, No. 2, nominally 66c; No. 3 red, nominally 60@64c; No. 4 red, 58c; rejected red, nominally 49@55c. Spring, No. 2, nominally 62c; No. 3 spring, 56c; rejected spring, nominally 50@54c. Corn—Receipts here to-day were 37 cars; a week ago, 82 cars; a year ago, 85 cars. Sales by sample on track: Mixed, No. 2, 28½@28¼c; No. 3 mixed, 28c; No. 4 mixed, nominally 27c; no grade, nominally 26@27c. White, No. 2, 28¼c; No. 3 white, 28c; No. 4 white, nominally 27c. Oats—Receipts here to-day were 24 cars; a week ago, 15 cars; a year ago, 43 cars. Sales by sample on track: Mixed, No. 2, nominally 22c; No. 3 mixed, 20½c; No. 4 mixed, nominally 18@20c. White, No. 2, 23¼@23¼c; No. 3 white, 22@28c; No. 4 white, nominally 21c. Rye—No. 2, 43@44c; No. 3, nominally 42c; No. 4, nominally 40c. Hay—Receipts here to-day were 51 cars; a week ago, 116 cars; a year ago, 107 cars. Quotations are: Choice prairie, \$5.25; No. 1, \$4.75@5.00. Choice timothy, \$6.50@7.00; No. 1, \$5.75@6.25; timothy and clover, \$5.50@5.75.

Kansas City Produce.
Kansas City, Aug. 22.—Eggs—Strictly fresh, 11¼c per doz.
Butter—Extra fancy separator, 17c; firsts, 15¼c; dairy, fancy, 15c; store packed, 12c; packing stock, 10¼c.
Poultry—Hens, 6¼c; broilers, 9c per lb.; roosters, 15c each; ducks, 5c; young ducks, 7c; geese, 4c; goslings, 7c; hen turkeys, 7c; young toms, 6c; old toms, 6c; pigeons, 50c per doz.
Fruit—Grapes, 20@25c per peck. Peaches, 75c@81.00 per 6-basket crate. Apples, 40@50c per ¼ bu.
Vegetables—Roasting ears, home grown, 5@6c per doz. Tomatoes, home grown, 20@40c per bu. Cucumbers, 15@20c per bu. Peas, home grown, marrowfat, \$2.00 per bu. Green and wax beans, 30@50c per bu. Lettuce, home grown, 30@50c per bu. Onions, new, 25@30c per bu. Beets, 25c per 3 doz bunches. Cabbage, home grown, 50@65c per 100-lb. crate. Celery, 40@50c per doz.
Potatoes—Home grown, 25@30c per bu. in car lots. Sweet potatoes, home grown, 75c per bu.

A LONG SIEGE.
After thirteen years of continuous assault by all kinds of stock, the first Page fences we built are still impregnable against "land forces."
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Celebrated "Des Moines" Equalizers
Four Horses For Plows and Binders
No experiment. Ten years on the market. Thousands in use. Prices right. Descriptive matter, prices, etc., on application.
SPECIALTY MFG. CO., Des Moines, Iowa.

GOODHUE
Self-acting, Best Governed, Acknowledged to be the most powerful and durable made. We have everything the farmer needs in this line.
Towers, Tanks and Pumps, Outlets, Grinders, Shellers, etc.
POWER AND MILLS
Catalogue, full of valuable points, free.
Appleton Mfg. Co., BATAVIA, ILL.
19 Fargo St.
Mention Kansas Farmer.

The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kas., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the Kansas Farmer. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

KANSAS STATE POULTRY ASSOCIATION.

President, A. M. Story, Manhattan.
Secretary, J. W. F. Hughes, Topeka.

Poultry Show—At Topeka, January 9 to 14, 1899. C. H. Rhodes, Judge.

IMPROVING FARM POULTRY.

The farmer's flock is usually of all sizes, shapes and colors that fowls ever grow to. They are often abused, neglected, half starved and left to shift for themselves generally; but, for all that, they generally pay their way and often return a fair profit. Notwithstanding the neglect and abuse, they live and thrive; bring up large families of healthy chickens under the most discouraging circumstances.

OUR COMMON FOWLS

are extremely hardy. They are compelled to be so by the nature of their surroundings—an example of "the survival of the fittest"—are good foragers, mature early, are good layers, good sitters and excellent mothers, and while I think it will pay handsomely to change to a flock of thoroughbreds, yet, if this cannot be afforded, rather than not have any poultry on the farm, start with common hens. Take the same care and pains with them that you would with thoroughbreds, and see how quickly they will respond and how generously.

If size be your object, select some of the largest common hens and mate them with a thoroughbred rooster of some of the larger breeds—Brahmas or Cochins, for instance. If eggs and lots of them are wanted, then select those hens which are known to be the best and most persistent layers and mate with a male possessing in his antecedents this special feature.

Chickens from these matings will be "half-bloods," and much superior to their mothers. The second year, select the best of these "half-blood" pullets and mate them back to their sire, if he is a good one, thus impressing more firmly on the offspring the good qualities of the male. The result of this year's work will be three-fourths thoroughbred, and will not be inbred enough to hurt the vitality. For the third year, again select the best pullets of those raised the second year and buy another thoroughbred male of the same breed and with the same good qualities as the first, to mate with them, breeding back to him the fourth year with selected pullets as before. By this time the flock is practically thoroughbred, having only one-sixteenth impure blood, and doubtless very uniform in shape, color and characteristics. And this result has been accomplished by the simple outlay of a few dollars for two good males. This has been done repeatedly, and, by proper selection, in five years strains have been built up that would rival the Leghorns and Hamburgs for egg production or any of the larger breeds for table use.

And, right here, let me say that as a rule farmers keep too many males with their flocks. One good rooster is worth more than a dozen mongrels, and one is all that is needed with any farm flock, no difference how large. It is a fact that has been demonstrated, time and again, that for egg-production the male is useless, in fact a detriment, as the hens will lay a greater number of eggs without males than with them, with the added advantage that the eggs are infertile and hence will keep fresh much longer. Therefore, with only one male to buy every two years, any farmer can well afford to get the best.

Now, let me tell you

HOW TO MANAGE

your flock with only one rooster, and follow out the lines of instruction as above to improve each year.

Select enough of the best hens and pullets to produce the required number of chicks wanted. Ten or twelve would lay eggs enough to hatch all the chicks any ordinary farmer would desire to raise. Mate these with a thoroughbred male and keep the eggs from these hens for hatching only. Of course this would require that they be penned and housed to themselves, but fencing is cheap now, and I think it will be found that the fowls will do enough better to more than pay the extra expense the first year, provided they have proper care and feed. They can be let out for exer-

cise once in a while, and will lay more eggs, and better for hatching than if running at large. It is evident, too, that more attention should be paid to the feed when in confinement, to furnish them a variety, with plenty of green stuff and other things to take the place of the bugs and worms they would get on free range; but the result will justify the extra care and expense. The balance of the hens can run wild if it is preferred, and will furnish the market eggs.

Try this plan, brother farmers, and you will be surprised at the results obtained in so short a time and at so small expense, and I feel assured you will never go back to the old haphazard way of raising chickens again.

Poultry Notes.

One essential point in maintaining vigor among the fowls is to avoid inbreeding, and one of the best ways to avoid inbreeding is to sell off all of the cocks in the fall and purchase new blood for breeding.

When eggs are wanted during the winter, it is essential, first, to have early-hatched pullets or early-moulting hens or both. Then they must have warm, dry quarters, and a good variety of food—three things that should be looked after now, if they are to be provided most economically.

There are at least two good reasons why fowls that can have a free range keep in better health than those closely confined. One is the better variety of food that they are able to pick up, food which is best for digestion, and at the same time are able to secure the grit necessary to properly prepare it for digestion.

When old hens are to be marketed, in a majority of cases it will be a good plan to sell as soon as they are through laying. Usually the older hens moult later in the summer or fall than the younger and more vigorous fowls; and the later-moulting hens will rarely lay before spring. This means feeding them a good while without receiving any returns, and with the exception of those that are wanted especially for hatching, the better plan will be to fatten and market them as soon as possible.

Both with growing and fattening fowls, when it is desired to secure a rapid gain, frequent feeding will give the best results. Give a less quantity but give more frequently, taking care not to give at any one time more than is readily eaten up clean. Give a sufficient variety to maintain a good appetite, as this is essential to have the fowl eat well and make the most of what it eats, and with both classes of fowls, some soft feed can be given with benefit, and especially can the morning feed be soft.

Generally in the fall is the best time to purchase, as a better selection is possible, while prices are nearly always lower. After fowls have been wintered, most breeders ask considerable more for them and there is less opportunity for selection. Get good roosters of some standard breed, and then stick closely to that breed, selecting the best hens and securing new roosters each time, and in this way not only maintain vigor among the fowls, but improve the quality of the flock. It pays to keep good fowls on the farm as well as with the fancier.

Eldon, Mo. N. J. SHEPHERD.

Selections.

POULTRY RANGES.

Poultry on the range during the summer are subsisting on products that the farmer cannot utilize, and at the same time are enriching the ground. If wire netting cost four times its present price it would still pay to fence in a liberal area of ground for a range and to change the range every two years. Intelligence should be used in caring for the poultry during the summer, as well as in the winter, and they should be provided with ample ranges where the ground may afterward be put in some crop. They will pick up insects, destroy weeds by eating the seeds, scratch for worms of various kinds and add fertility to the soil with their droppings. Furnish plenty of pure fresh water, green foods of the kind they do not get on the range, some grain at night, occasionally or regularly as required, and the fowls will go into winter quarters in the fall ready for a winter's work in egg-production, having cost comparatively little for food during the summer.

KEEPING ONE BREED.

The poultryman who makes a success is usually the one who chooses a breed seemingly best suited to his needs and sticks to it, not changing until thoroughly convinced after a thorough trial

through several seasons, good and bad, that he made a mistake. It is not always an easy matter to make the best choice at first, and great care should be exercised in this respect. So far as the choice of breeds is concerned, the opinion among poultrymen of experience seems to be in favor of the Leghorns for eggs and the Barred Plymouth Rock when a combination of eggs, broilers and roasters is wanted. Then the Wyandottes, Langshans and Minorcas have many good points and strong adherents. If, after carefully selecting the breed best suited to your ideas, you give the flock the care and treatment experience will teach you it requires, it will not be long before you will probably consider it "the best breed in the world." If, however, it seems best to change, remember that all you have learned about the first breed may have to be unlearned before you can successfully handle the other. This is the more reason why you should consider long and carefully before making a change.

MOULTING HENS.

The year-old pullet ought to moult in July or August, and if properly fed during the winter and spring the process will be a quick and easy one and she will soon be back to business. If she shows no signs of moulting beyond the ceasing of egg-production the moulting may be hastened somewhat by proper care and feeding. As soon as these pullets stop laying, separate them from the males and if possible give them a free range. The food should include a morning mash of bran, ground corn and oats, corn meal and linseed meal in equal quantities. Twice or three times a week a small portion of ground beef scraps should be added to the mash. This treatment will assist in the rapid and healthy growth of new feathers. If the older hens continue laying through the moulting period of the pullets they should be kept as long as they continue the egg supply or until pullets begin laying again, when they may be fattened and marketed.

PROFITS IN POULTRY.

One trouble with the farmer who attempts to raise poultry for profit is that he expects to make that profit wholly from eggs, or wholly from the carcass, either of which plans is not a profitable one unless carried on with large flocks. It is carefully estimated that the food for a mature hen for a year costs in the neighborhood of 50 cents, and more if none of it is raised, and that an average egg-production per hen is about ten dozen a year, bringing an average price of 15 cents per dozen, leaving \$1 profit, or rather \$1 on each hen to represent the labor and investment in buildings.

While some hens lay more and others less, the average is a fair one, as is also the average price named per dozen. In order to make hens in small numbers pay, the increase of stock, whether raised or sold, should pay for the feed, leaving the entire proceeds from eggs as profit, interest on investment and payment for care. This is possible if each hen raises four chickens a year to a salable age. The poultry farm, be it large or small, run on this plan will yield a satisfactory profit.

COST AND PROFIT FOR A YEAR.

Six pecks of corn or wheat should be more than enough for a hen during a whole year, as she will need much less food in summer than in winter. The next point is, how much will the six pecks of food cost? At present prices the cost of six pecks of corn should not exceed 40 cents; at wholesale the cost is less, says the Poultry Keeper.

The second point is, how many eggs will the hens lay, and how much is obtained for them? Let us fix the cost of food for a year at 50 cents, for when we estimate on six pecks of grain a year we mean grain or its equivalent; but when other food is given, then the grain must be reduced proportionately. It is difficult to estimate the exact quantity, as there is no way of knowing the proportions of bone, meat, grass, worms, etc., eaten, hence the cost is based upon six pecks of grain, which is as much as a hen will eat in a year if she receives no other food. With 50 cents as the cost of food for a year, eggs should sell at 18 cents a dozen, allowing eleven dozen (132) eggs as the production of the hen to clear \$1 profit. The cost of buildings, labor, etc., is not included. Some hens will not lay 100 eggs in a year, and a flock may contain sick hens, worthless hens and a large number of males. We do not believe, therefore, that eggs alone will pay unless one can manage large flocks. But the hens can hatch and raise chicks, and that is where the profits will be gained, for if the hen raises only two

Veterinary Column.

J. F. H., Cambridge, Mass.—A sprain such as you describe is not incurable. Use Tuttle's Elixir.

Horseman, Elgin, Ill.—There is only one sure way to locate a lameness. Apply Tuttle's Elixir, and it will remain moist on the part affected.

Mrs. F. S. T., Richmond, Va.—If you find a case of colic that Tuttle's Elixir will not cure, it will entitle you to the \$200 reward offered by Dr. Tuttle.

Wilbur S. Davis, M.D., Alton, N. H., writes: "To whom it may concern:—This certifies that my horse, on the twentieth day of January, 1899, ran away with a hitching post and injured her knees so badly that she was pronounced worthless by several horse doctors. I tried various remedies for six weeks and she grew worse. I at length used Tuttle's Elixir, and in three weeks from the time I commenced to use it I had her on the road ready for work. The knees healed so nicely that it is difficult to find the scars."



Tuttle's Elixir

will do all that we claim for it, or we will refund your money. It will cure all forms of lameness, colic, sprains, cockle joints, etc. Send to us for full particulars, MAILED FREE. Tuttle's Family Elixir cures Rheumatism, Sprains, Bruises, Pains, etc. Samples of either Elixir free for three 2-cent stamps for postage. Fifty cents buys either Elixir of any druggist, or it will be sent direct on receipt of price. DR. S. A. TUTTLE, 27 Beverly Street, Boston, Mass.

or three chicks she will in that manner pay all of her expenses, leaving the eggs as so much clear profit, the amount of profit being according to the price obtained for the eggs, which are greater in some localities than in others. We believe that, to make poultry pay, one will secure the best results from poultry and eggs combined easier than from eggs alone.

MILK FOR POULTRY.

Young chickens, especially if in confinement, should have liberal feeds of skim-milk. It is muscle- and flesh-forming, easily digested and produces a vigorous and healthy growth. If fed with grain and green foods the results will often be surprising. Sour or clabbered milk is of great value to laying hens whether in confinement or on the range. Prominent poultrymen who raise eggs for market make a practice of buying this milk from dairymen and creameries at a low price and find it very profitable. Milk in any form contains the elements needed by both young chicks and laying hens in connection with the other foods usually given. It is inexpensive, even when it must be bought, and will do more to make the growing chick a profitable laying pullet during winter than any other food. Winter-fed it seems to be required in the way of a "condition food," to say nothing of its value in other directions.

NOTES.

Fowls in confinement, more or less close, are troubled with scaly legs, due to minute parasites. These may be readily removed by an application of melted lard used twice a week until the crust is gone.

A experienced breeder states that he has always been successful in treating roup, debility and bowel disorders by mixing equal parts of quinine, powdered saffron and red pepper. For a sick fowl a small pinch of the mixture is moistened with tincture of iron and given twice a day.

The best tar for poultry houses is pine tar. It is more repugnant to insects than coal tar, besides, the odor is more pleasant. If boiled with some resin, to harden it, and the roosts painted thoroughly while hot, the coating will remain on the poles for years and be effective in driving off vermin. If it is thinned down with turpentine the inside walls can be painted and mites cleaned out forever.

If you allow a draught of air to flow over your fowls at night, the probability will be that you will find their heads and eyes swollen in the morning. The first thing to do is to remove the cause by stopping up the cracks or the ventilator hole at the top of the

ITALIAN BEES.

Bred from queens imported from Italy. Full colonies; two, three and four frame nucleus shipped anywhere and safe arrival guaranteed. We ship bees any time from March to November. Queens, hives and supplies generally.

A. H. DUFF, Larned, Kas.

THE IMPROVED VICTOR INCUBATOR
Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class hatcher in the market. Openings FREE.
GEO. ETEL CO. QUINCY, ILL.

poultry house. The best remedy is to anoint the head and eyes with a few drops of a mixture of one part of spirits of turpentine and four parts of sweet oil.

Coming Poultry Shows.

Kansas State Poultry Association.—J. W. F. Hughes, Secretary. At Topeka, January 9 to 14, 1898. C. H. Rhodes, judge. Wichita, State Fair, Kansas.—H. O. Toler, Secretary, Wichita, Kas. September 19-24, 1898. C. H. Rhodes, judge. Garden City Poultry and Pet Stock Association.—A. S. Parson, Secretary, Garden City, Kas. Show September 13-16, 1898. C. H. Rhodes, judge. Abilene Poultry and Pet Stock Association.—Roy O. Shadinger, Secretary, Abilene, Kas. Second annual exhibit, at Abilene, January 25-28, 1899. Theo. Sternberg, judge. Butler County Fancy Poultry and Pet Stock Association.—C. H. Pattison, Secretary and Treasurer, El Dorado, Kas. Second annual exhibit at El Dorado, Kas., December 20-23, 1898. C. H. Rhodes, judge. Topeka Fanciers' Association.—L. V. Marks, Secretary, Topeka. Exhibit January 9-14, 1899, in connection with State show. Horton Poultry Show.—J. Chase, Willis, Kas., Secretary. November 21-24, 1898. C. H. Rhodes, judge. Northwest Missouri Poultry Association.—R. V. Glenn, Kingston, Mo., Secretary. Kingston, Mo., November 24-26, 1898. C. H. Rhodes, judge. Ottawa County Poultry Association.—Mrs. D. Collister, Bennington, Kas., Secretary. Bennington, Kas., November 28-30, 1898. C. H. Rhodes, judge. Manhattan Poultry Association.—S. J. Norton, Manhattan, Kas., Secretary, Manhattan, Kas., December 1-3, 1898. C. H. Rhodes, judge. Mitchell County Poultry Association.—A. Whitney, Beloit, Kas., Secretary. Beloit, Kas., December 6-10, 1898. C. H. Rhodes, judge. Smith County Poultry Association.—S. C. Stevens, Smith Center, Kas., Secretary. Smith Center, December 12-13, 1898. C. H. Rhodes, judge. Arkansas Valley Poultry Association.—Mrs. H. P. Swerdfefer, Wichita, Kas., Secretary. Wichita, Kas., December 13-18, 1898. C. H. Rhodes, judge. Garfield County Poultry Association.—A. F. Rumsel, Enid, Okla., Secretary. Enid, Okla., December 24-25, 1898. C. H. Rhodes, judge. Chase County Poultry Association.—C. M. Rose, Cottonwood Falls, Kas., Secretary. Cottonwood Falls, December 27, 1898, to January 1, 1899. C. H. Rhodes, judge. Rooks County Poultry Association.—N. N. Neher, Stockton, Kas., Secretary. Stockton, Kas., January 2-5, 1899. C. H. Rhodes, judge. Glasco Poultry Association.—M. E. Potts, Glasco, Kas., Secretary. Glasco, Kas., January 5-7, 1899. C. H. Rhodes, judge. Central Oklahoma Poultry Association.—H. F. Stephenson, Kingfisher, Okla., Secretary. Kingfisher, Okla., January 16-21, 1899. C. H. Rhodes, judge.

MICA AXLE GREASE lightens the load—shortens the road. Makes the wagon pull easier, helps the team. Saves wear and expense. Sold everywhere.

A Good Wagon begins with good wheels. Unless the wheels are good the wagon is a failure. IF YOU BUY THE ELECTRIC STEEL WHEEL made to fit any wagon—your wagon will always have good wheels. Can't dry out or rot. No loose tires. Any height, any width tire. Catalog free. ELECTRIC WHEEL CO., Box 46 QUINCY, ILL.

We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. Our productions 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. CURTIS WINDMILL CO., AGENTS WANTED. Manhattan, Kas.

Assure between burrs in grinding is carried on chilled roller bearings. Large inside burr revolves twice to sweep a one ordinary length sweep. DAIN DOUBLE MILL. Sold under an absolute guarantee to do double the amount of work of any other mill of same size or money refunded. Write for circulars and prices. DAIN MFG. CO., Carrollton, Mo.

The Test of Time is severe and inflexible, and the verdict is always convincing. The Perkins Wind Mills have stood the test of time in wheel, rudder, regulator and all parts, they are strong, durable, efficient and easy working. Built in many sizes. Meet every requirement for every purpose. Catalogue sent Free. PERKINS WIND MILL CO., 31 Race St., NISHAWAKA, IND.

GREAT PREMIUM OFFER! Bagster Art Bible PROFUSELY EMBELLISHED WITH Full Page Half-Tone Illustrations from Photographs of Paintings of the WORLD'S GREATEST MASTERS.

INCLUDED IN OUR LIST ARE DORÉ, RAPHAEL, RUBENS, MURILLO, HOFFMANN, PLOCKHORST, MUNKACSY, MICHAEL ANGELO, SCHOPIN, and many others.

Price within reach of all. (ABOUT HALF PRICE OF FORMER ART BIBLES)

Fine Divinity Circuit Binding, Extra-Large Self-Pronouncing Type, Fine Paper, References, Concordance. Size of Page, 5 1-2 x 8 3-8 inches.

Advantages of the ART BIBLE. TEACHERS OF CHILDREN'S CLASSES in Sunday School can instantly gain the attention of their scholars by showing these beautiful pictures and then relating the story illustrated.

CHILDREN AT HOME, attracted by these illustrations, will love better the "Sweet Story of Old," and learn more of Him, who said: "Suffer the little children to come unto me."

A REAL WORK OF ART speaks to the heart and understanding of all. Thus, the leading events of the Old and New Testament are made more real and life-like, and young and old alike learn to love the Book of the world.



MADONNA AND CHILD JESUS. GROSSE. (This shows one of the illustrations from the Bagster Art Bible, but reduced to about one-quarter size. The paper and printing in this Bible is superior to most newspaper and magazine work.)

Specimen of Type in Art Bibles and Style F Bagster Teacher's Bible: Exhortation to all goodness. PHILIPPIANS, 4. Liberty of the Phil

prehend that for which also I am apprehended of Christ Jēsus. 13 Brethren, I count not myself to have apprehended: but this one thing I do, forgetting those things which are behind, and reaching forth

1 Zec. 3. 2, Ac. 0. 3. 6. 2 1 Co. 9. 24. Ep. 12. 1. 3 Ga. 5. 10.

6 Be careful! for nothing every thing by prayer and tion, with thanksgiving, let, quests be made known unto 7 And the peace of God passeth all understanding, at

OUR GREAT OFFER! Style G, Bagster Art Bible.—Fine Morocco, Divinity Circuit Binding, linen lined, long primer type, self-pronouncing. Publishers' list price \$6.00 FOR ONLY \$3.00! Subscription One Year to this publication, Style H, Bagster Art Bible.—Fine Morocco Binding, Divinity Circuit, leather-lined to edge, (Publishers' list, \$8.00), can be had for 75 cents additional. Style F, Bagster Teacher's Bible.—Long primer type, self-pronouncing, Divinity Circuit, (same type as Art Bible), and subscription One Year to this publication ONLY \$2.25. Style B, Bagster Teacher's Bible.—Full, regular size, clear, minion type, Divinity Circuit, and subscription One Year to this publication, ONLY \$1.90. Patent Thumb Index with any Art or Teacher's Bible, 50 cents additional. We pay postage.

Address KANSAS FARMER CO., Topeka, Kas.

Port Arthur's Prosperity Is Based on Business.

Over 12,000 tons of export and import freight now being handled over its docks per month.

Three steamship lines now running to British, Continental and Mexican ports.

Over one-half the canal completed to a depth of sixteen feet.

One hundred thousand dollars' worth of property sold in March.

Go to Port Arthur and see what the backing of a 1,227 mile trunk line means.

For information write to F. A. HORNBECK, General Manager Port Arthur Townsite Co., KANSAS CITY, MO.

Brass, Aluminum, Grey Iron Castings Patterns, Models, Machine Work. TOPEKA FOUNDRY, TOPEKA, KAS.

Improvement in Pure Water Troughs. OLD RELIABLE "NOVELTY" EVER THE BEST MADE.

Galvanized Float. Note the Raised Center. Guaranteed Mud Proof or Money Back. Price \$3 Freight paid to any point. Catalogue Free. Novelty Mfg. Co., Rock Island, Ill.

HORSE-HIGH BULL-STRONG PIG-TIGHT Laying aside all speculation these remain as the requisites of a perfect fence. Our Duplex Automatic Machine makes just such a fence in 100 styles at the rate of sixty rods per day, at a cost for wire of only 18c. for a good farm fence; 19c. for poultry fence; 16c. for a rabbit-proof fence and 12c. for a good hog fence. We will sell you plain, coiled spring or barb wire direct at wholesale prices. Get our catalogue before buying. Kitzelman Bros., Box 64, Ridgeville, Ind.

LIGHTNING HAY PRESS STEEL Special prices. Kansas City Hay Press Co., 403 Mill St. Kans City Mo.

Best Trains VESTIBULED "ELI" TO CHICAGO. VESTIBULED LIMITED TO ST. LOUIS. FREE CHAIR CARS, LATEST PATTERNS OF SLEEPERS. W. WAKELEY, Q. P. A., St. Louis, Mo. J. C. BRAMHALL, T. P. A., St. Joseph, Mo. WHEN WRITING ANY OF OUR ADVERTISERS PLEASE MENTION KANSAS FARMER.

ALFALFA SEED FOR FALL SOWING

McBETH & KINNISON, GARDEN CITY, KANSAS, Wholesale and Retail Seedsmen.

Send for Our Free Manual on the King of Forage Plants.

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.

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

HEREFORD CATTLE.—Breeding stock for sale. Archibald cattle a specialty. Visitors welcome. J. C. Curry, proprietor "Greenacres Farm," Quenemo, Osage Co., Kas.

FOUR YOUNG BOARS for sale at a bargain; two by Look-Me-Up by Look-Me-Over and two by Tecumseh Short Stop. Also gilts and sows of good breeding, at reasonable prices. Combination Model 20112 heads the herd. W. B. Van Horn, Lawrence, Kas.

WANTED.—To sell, or exchange for boar of equal breeding and quality, Hugo Wilkes No. 17107, farrowed April 2, 1898. Also choice Poland-China gilts for sale. Call on or address Walter Roswurm, Beman, Morris Co., Kas.

SEND \$16 for a choice early farrowed Poland-China gilt delivered at your station. Large, fashionably bred, "fine as silk." Rose Creek Farm, Chester, Neb.

WANTED, TO TRADE.—Thoroughbred Poland-China hogs for Shropshire sheep. For particulars, address Walter Roswurm, Beman, Morris Co., Kas.

FOR SALE OR TRADE.—A Norman stallion, age ten years, weight 1,900 lbs. For further information address John D. Marshall, Walton, Kas.

RENO POULTRY FARM, Mount Hope, Kas. Ira A. Fisher, prop'r. Breeder of White P. Rocks, White Holland Turkeys, White Guineas, Pekin Ducks. Eggs and stock for sale in season. Prices reasonable.

POLAND-CHINA BOARS.—Sired by the great Hadley Boy No. 18518, at \$12 each. W. S. Powell, Moline, Elk Co., Kas.

HADLEY BOY 18518.—Price \$40. W. S. Powell, Moline, Elk Co., Kas.

FOR SALE.—125 Western yearling heifers, of good quality and color. Address L. Nation, Hutchinson, Kas.

BED RUSSIAN SEED WHEAT.—For sale at \$1.10 per bushel sacked, at the Kansas Seed House, F. Barteldes & Co., Lawrence, Kas.

FOR SALE.—75 steer calves; reasonable for cash. Address J. W. Higgins, Jr., Hope, Kas.

FOR SALE.—250 choice grade Shropshire ewes, well woolled and bred to registered Shropshire bucks; also 125 lambs for sale reasonable for cash. Address J. W. Higgins, Jr., Hope, Dickinson Co., Kas.

RICHLAND HERD.—I want to close out the entire herd of Poland-China sows and herd boars, including Kievers' 1st Model 18245 S., What's Wanted Jr. 2d 18384, and P.'s Black U. S. 19387. The breeding and quality of these boars ought to suit anybody. Come and inspect, the only way to get suited. F. W. Baker, Council Grove, Morris Co., Kas.

DAIRY WAGON FOR SALE.—Good two-horse covered dairy wagon, custom made. A. E. Jones, Topeka, Kas.

MEN WANTED.—I want to employ two good men for my ranch at Arlona, Wyoming. Address me in care of Kansas Farmer Co., Topeka, Kas. I will be at Kansas Farmer office September 1. Edgar Holce.

FOR SALE OR TRADE.—Three Shetland ponies. Call or address H. W. McAfee, Topeka, Kas. (Prospect Farm, three miles west of Kansas avenue.)

HIGH-GRADE Shropshire rams, lambs and yearlings. E. W. Melville, Eudora, Kas.

SHORT-HORNS FOR SALE.—Forty-six cows and 5 heifers, Cruickshank, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Cruickshank, Royal Prince 100646. Six bulls ready for service, sired by Young Mary bull, Glendon 119371. Parties met by appointment. Theodore Saxon, St. Marys, Pottawatomie Co., Kas.

BERKSHIRES.—Choice bred sows by imported Lord B. Comely, and boars ready for service. Wm. B. Sutton & Son, Russell, Kas.

BERDEN-ANGUS BULLS.—Three individuals of serviceable ages; registered. Wm. B. Sutton & Son, Russell, Kas.

FOR SALE.—Five first-class registered Clydesdale stallions. H. W. McAfee, Topeka, Kas.

MACLEAN FARMERS' SUPPLY CO., Kansas City, Mo. (Between Union Depot and Stock Yards.) Sell machinery and other supplies to farmers direct, saving the consumer middlemen's profits. Send now for 1898 Spring Price List.

BLOSSOM HOUSE.—Opposite Union depot, Kansas City, Mo., is the best place for the money, for meals or clean and comfortable lodging, when in Kansas City. We always stop at the BLOSSOM and get our money's worth.

SHORT-HORN BULLS.—Cruickshank-topped, for sale. Choice animals of special breeding. Address Peter Slim, Wakarusa, Shawnee Co., Kas.

FOR SALE.—A few October pigs of 1897 farrow, and some bred sows to Kansas Boy and Success I Know. Also B. P. Rock eggs, \$1 per setting. H. Davison & Son, Waverly, Kas.

FOR SALE.—Thirteen fine Poland-China boars. Call on or address H. W. McAfee, Topeka, Kas. (Farm three miles west of Kansas avenue.)

WRITE TO ALEX RICHTER.—Hollywood, Kas., how to sub-irrigate a garden, etc., and cost of same. Send him the size or dimensions of your garden, and he will give full information.

FOR SALE OR EXCHANGE.—Two Galloway bulls. Address W. Guy McCandless, Cottonwood Falls, Kas.

640 ACRES ARKANSAS LAND.—Two miles from station, to trade on Kansas farm. Will pay balance or assume incumbrance. E. W. Melville, Eudora, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy-backs and let-down end-gate, for \$55. Warranted. We will ship on approval to responsible parties. Kinley & Lannan, 424-426 Jackson street, Topeka, Kas.

YEARLING SHORT-HORN AND GALLOWAY BULLS.—Registered and high grades, of Bates and Cruickshank stock, at bedrock prices, either by carload or singly, time or cash. J. W. Troutman, Comiskey, Kas. (Northern Lyon county, Mo. Pacific R. R.)

TEN SHORT-HORN COWS AND HEIFERS.—Registered, a choice bunch; want to sell all together; will be five more calves within two months. Price, \$1,100. J. M. Anderson, Box 246, Salina, Kas.

LIVE STOCK AUCTIONEERS.

GEORGE W. BARNES, Auctioneer, Valencia, Kas. Lowest terms. Extensive experience both as breeder and salesman. All correspondence given prompt attention.

J. N. HARSHBERGER,

LIVE STOCK AUCTIONEER, LAWRENCE, KAS. 17 Years of experience. Sales made anywhere in the United States. Terms the lowest. Write before claiming date.

S. A. SAWYER, FINE STOCK AUCTIONEER.—S. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yards, Denver, Col., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

MEADOWBROOK HERD.

J. R. KILLOUGH & SONS, Ottawa, Kansas.

We have for sale 25 pigs by J. R.'s Tecumseh of March and April farrow. Also a few females of choice quality not registered.

NORWOOD SHORT-HORNS.—V. R. Ellis, Gardner, Kas. Rose of Sharons, Lady Elizabeths and Young Marys. Richest breeding and individual merit. Young bulls by Godwin 115676 (head of Linwood herd). Sir Charming 4th now in service.

Live Stock Artist.

F. D. TOMSON, 514 Monroe St., Topeka, Kas. Portraits for framing and cuts prepared for advertising purposes. Breeders' correspondence solicited.

HARNESS Write for illustrated catalogue. Largest Harness and Carriage house in the Northwest. NORTHWESTERN HARNESS & CARRIAGE CO., 172 6th St., St. Paul, Minn.

20 BUSHELS MORE PER DAY is what you can husk and save your hands by using Kees Improved Corn Husker. See your dealer or sent postpaid on receipt of 50c. (No stamps.) Address, F. D. KEES, Beatrice, Neb.

W. E. SPEARS

RICHMOND, KAS.

For Sale—22 Head of Herefords.

Five registered cows—Lord Wilton and Anxiety—bred to Dial 3d No. 11453; fifteen grade cows, all bred; one yearling bull, Lord Wilton and Anxiety; one five-year-old bull, sired by Banker No. 1324, by Illinois No. 920 (5395).

WRITE FOR PARTICULARS.

J. G. Peppard

1400-2 Union Avenue, KANSAS CITY, MO.

MILLET CANE CLOVERS TIMOTHY GRASS SEEDS.

SEEDS

THE BEST

CREAMERY BUTTER SALT

In the world is manufactured in Kansas. INSIST on having RIVERSIDE brand. A free sample will be gladly furnished on application by... Kansas Salt Co., Hutchinson, Kas.

VERNON COUNTY HERD OF REGISTERED POLAND-CHINAS

125 head in herd. Herd boars, King Hadley 16766 S. and Turley's Chief Tecumseh 2d 17978 S. Forty-six head of fall pigs that would be considered "the best" in a herd in United States. Write for particulars. Prices right and stock guaranteed. J. M. TURLEY, Stotesbury, Vernon Co., Mo.

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

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, 1896. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 23441, Black Joe 23603, World Bester 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.

Sir Charles Corwin 14520 and Harry Faultless, Jr. HEADS OF HERD.



We have been in the show ring for the last three years, always winning the lion's share of the premiums. If you want prize-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale. Write or come and see us. We have an office in the city—Rooms 1 and 2 Firebaugh Building.

ELM BEACH FARM, Wichita, Kas., C. M. IRWIN. S. C. DUNCAN, Supt

VALLEY GROVE SHORT-HORNS.

THE SCOTCH BRED BULLS

Lord Mayor 112727 and Laird of Linwood 127149

HEAD OF THE HERD.



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

Address T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.

SALE, SEPTEMBER 1, 1898.

Poland-Chinas and Berkshires

BERRYTON, SHAWNEE CO., KAS.

FOURTEEN POLAND-CHINA BOARS, including the great prize-winner and herd boar, Darkness Wilkes 18156. SEVENTEEN SOWS, sired by Chief I Know, L.'s Tecumseh, Hadley 2d, W. B.'s Tecumseh, Corwin Chief I Know, and Victor E. Jr., bred to Darkness Wilkes.

ABOUT TEN HEAD OF BERKSHIRES, including the yearling boar, Headlight, and a fine yearling sow.

FARM AT THE STATION—Nine miles southeast of Topeka, on the Missouri Pacific railway.

COL. S. A. SAWYER, Auctioneer. GEO. W. BERRY, Breeder.

SHROPSHIRE RAMS.

Single or car lots. First-class, all ages, at prices that will sell them. Will spare 50 breeding ewes—grand, useful, high-class ewes. Write your wants. KIRKPATRICK & SON, Connor, Wyandotte County, Kansas.

REGULAR SEMI-ANNUAL SALE OF REGISTERED POLAND-CHINA SWINE.

AT MARION, MARION COUNTY, KANSAS, WEDNESDAY, SEPTEMBER 14, 1898.

FORTY-THREE HEAD SPECIALLY SELECTED POLAND-CHINAS—Thirty-five sows and gilts, with eight serviceable boars. One-third of the sows will go with litters at side. Other females bred to farrow after sale and some open for early spring litters. Full particulars as to breeding, etc., in the sale catalogue, now ready to mail to all desiring it. I consider this lot to be the best I ever drove into the sale ring.

Free entertainment for parties from a distance at Elgin Hotel.

TERMS:—Will be cash or note bankable at State Bank of Commerce, Marion, Kas.

W. H. WREN, Marion, Kas.

Col. S. A. SAWYER, Manhattan, Kas., and Col. JAS. N. HARSHBERGER, Lawrence, Kas., Auctioneers.

GRAND COMBINATION SALE OF PURE-BRED POLAND-CHINA SWINE! FORT SCOTT, KAS., TUESDAY, SEPTEMBER 6, 1898.

When over SIXTY HEAD, representing the most noted and fashionable families known to the breed, will be sold. The offering will consist of bred and open sows, a few gilts and some extra fine selected boars. All four consignors regard this offering the equal of any ever sold at auction sale in the West. Write G. Hornaday & Co., Fort Scott, Kas., for a free copy of the sale catalogue. Visitors entertained at the Tremont hotel. Lunch at 11 o'clock. Sale to open at 12 noon.

TERMS:—All sums of \$20 or less, cash without discount; over that amount, 5 per cent. off for cash; or credit of nine months with 8 per cent. interest from date until paid, on approved note.

B. R. ADAMSON, Fort Scott, Kas.

G. HORNADAY & CO., Fort Scott, Kas.

J. R. YOUNG, Richards, Mo.

J. M. TURLEY, Stotesbury, Mo.

COL. S. A. SAWYER, Manhattan, Kas., Auctioneer.