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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 Kiever's Model. They have typical ears and show fine markings. Address F. P. Maguire, Haven, Kas.

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EGGS \$1.50 for 13; \$2 for 26. A few fine cockerels to sell. J. C. WITHAM, Cherryvale, Kas.

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Eggs, \$1.50 per fifteen.
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A. H. DUFF, Larned, Kas.

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My stock has been tested in the strongest competition both west and east. Stock and eggs for sale. Write for descriptive circulars.
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To get at less than one-third value some of the best B. P. Rocks in the West—\$10 will buy yard of eleven fine females and one fine cockerel. Write quick, as this ad. will not appear again.
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BOSTON '98.—Yes, I have the Single-Comb Brown Leghorn Cock that won first. Probably the best colored Leghorn in the world, and have mated him to world-beater hens. White Plymouth Rocks, Pit Games and Pekin Ducks equally as good. Prizes won everywhere. I challenge any breeder anywhere to sell eggs from as good stock as mine as cheap as I do. Hen eggs, \$2 per 13. Duck eggs, \$1 per 13. W. Henderson, 411 Olive street, St. Louis, Mo. J. P. Royall, Supt. of Farm, Bridgeton, Mo.

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EGGS, \$1.00 PER 15.
Also, free with each setting, a recipe for making a cheap Lice Killer Paint. Send for circular.
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Eight years experience in breeding Rocks exclusively. Five pens—three Barred, two White; all high-scoring birds. They are mated to produce prize-winners. Males score from 91% to 94; by Hewes; females from 89 to 95%. Eggs, 13 for \$1; 30 for \$2; 50 for \$3; 100 for \$5. Write for descriptive circular. Printed recipe for making and using Liquid Lice Killer, 25c. Address:
T. E. LEFTWICH, Larned, Kas.

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AT FARMERS' PRICES. Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Light Brahmas, Silver Wyandottes, Black Javas, S. C. Brown Leghorns White Leghorns, Buff Leghorns, Silver-Spangled Hamburgs, White Guineas, Pearl Guineas and Buff Turkeys. Single birds, pairs, trios and breeding pens. Our stock is from the leading breeders and prize-takers of the country. Birds from \$1 up. Eggs \$1 per 13; \$5 per 100. Recipe for "Liquid Lice Killer" A. H. DUFF, Larned, Kas.

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

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.

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.

SELECT HERD OF BERKSHIRES

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

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.

Mound Farm Herd of Poland-Chinas.

100 head. Foundation stock, Tecumseh. Boars in service, Tecumseh Joe 1344 S., Chief 1384 S., Butler Wilkes 1764 S., U. S. Tecumseh 1780 S. 15 fall gilts, 30 spring pigs, 30 summer pigs. Inspection and correspondence invited.
H. E. Bachelder, Fredonia, Wilson Co., Kas.

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 (the 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.

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 R. Chester White swine and Light Brahma poultry. J. T. LAWTON, BURRTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

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 1481 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.

BLUE RIBBON HERD PURE POLAND-CHINA SWINE

and Barred Plymouth Rock chickens. Tecumseh Short Stop 14750 at head of herd, assisted by Hadley Jr.'s Equal 15119 and King Tecumseh 16307. One hundred choice pigs for sale. Farm located three miles southwest of city. Calls or correspondence invited.
R. H. WHEELER, Lawrence, Kas.

60-Poland-China Fall Pigs-60

Both boars and sows, for sale reasonable. Sired by the noted Nox All Wilkes, Highland Chief by Chief Tecumseh 2d, and Look at Me by Look Me Over. Three fine young sows safe in pig for sale.
B. P. ROCK Eggs from high-scoring birds, \$1.25 for B. P. Rock fifteen; \$5 per hundred.
DIETRICH & SPAULDING, Richmond, Kas.

Nation's Poland-Chinas.

Fifty boars and gilts for this season's trade. My herd boars consist of Darkness Quality 14361, Princeton Chief 14549, Col. Hidestretcher 37247 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited.
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BLUE MOUND HERD BERKSHIRE SWINE.

Herd boars, Victor Hugo 41799 (sire imp.), Barkis 3004 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice fall pigs from fine strains. Also breed Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.
Allen Thomas, Blue Mound, Linn Co., Kas.

PURE-BRED POLAND-CHINA SWINE.

Brood sows by Wren's Medium, Hadley M. Washington, Protection Boy, Moss Wilkes Tecumseh (by C. T. 2d), Tanner 1212, a grandson of the famous Hidestretcher, at head of herd, assisted by Prince Darkness, out of Darkness 1st. Corwin Sensation and Darkness 1st are very choice sows. Some October Tanner pigs for sale. Get one for a herd header. Also some One Price Medium 2d pigs for sale. Three young boars ready for service. Write for prices.
J. R. WILLSON, Marion, Kas.

ESTABLISHED 1882. SERVICE FEE \$50.
KLEVER'S 1ST MODEL
18245 S.

Sired by Klever's Model 14664 S., the \$5,100 king of boars; first dam Graceful Maid (43851); second dam Graceful F. 3d (29670), litter sister to Old Look Me Over 9011, the \$3,600 boar. This gives Klever's 1st Model all that could be asked in breeding and sale ring backing. He is black as ink, low down, deep and broad, extra head and ears. His get follows the pattern perfectly. He will be assisted by other good boars in service on thirty matured sows of modern type and breeding. I sell nothing but tops; keep my knife sharp for culls. Free livery at Roberts' stables.
F. W. BAKER,
Council Grove, Morris Co., Kas.

COUNCIL GROVE HERD POLAND-CHINA SWINE.

Herd boars are H's World's Fair No. 211930, grandson of Seldom Found 7815, Klever's Model 3d 19789, King Hadley 15037 (C). This hog is not only a show hog, but a prize-winner, breeding Hadley Blood, One Price Imitation, Guy Wilkes 2d, Black U. S., L's Tecumseh and Chief Tecumseh 2d.
Did you ever see such a combination? Where can you get more of the blood of the great sires combined in so grand an individual?
Choice gilts and fall pigs for sale.
W. F. Shamleffer, Council Grove, Kas.

GROUND LINSEED CAKE (OLD PROCESS)

For stock of all kinds. Write for prices. Manufactured by the
KANSAS CITY WHITE LEAD & LINSEED OIL CO., 24th & Broadway, KANSAS CITY, MO.

SWINE.

SHADY BROOK POLAND-CHINAS STOCK FARM.

H. W. CHENEY, Prop., NORTH TOPEKA, KAS.

Cheney's Chief I Know, assisted by Model Hadley, at head of herd. Topeka is the best shipping point and my stock the best kind to buy. When in Topeka call at 1132 N. Harrison St. and be shown stock.

Verdigris Valley Herd Poland-Chinas.

125 heads. The best individuals and most popular strains that money and judgment could buy and experience breed. Thirty choice spring pigs both sexes, by Black Stop Chief 16316 S., he by the great breeding boar Black Stop 10550 S., a son of the World's Fair winner, Short Stop. Write or visit us
WAIT & EAST, Altoona, Wilson Co., Kas.

Kansas City Herd Poland-Chinas

The future villa of Hadley Jr. 13314 O., the greatest boar of his age. I have pigs for sale now by Hadley out of Tecumseh Mortgage Lifter 32049 S. Order quick and orders will be booked as received. Farm nine miles south of Kansas City, on Fort Scott & Memphis R. R. Postoffice Lenexa, Kas.
W. P. GOODE, Proprietor, Lenexa, Kas.

MILES BROTHERS' HERD Registered Poland-Chinas.

Peabody, Marion Co., Kas.
We have for sale now some choice fall pigs by Miles' Look Me Over and out of a full litter sister to Corwin Sensation, that sold February 2, 1898, at Mr. Wren's sale for \$167.50. Also some nice ones by Hadley Corwin Faultless, and by a son of Chief Tecumseh 2d. We can suit you in quality and price. Write us.

PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

King Perfection 4th 13744 S. at head of herd, assisted by Tecumseh Wilkes 12694 S. and Lambing Ideal 14060 S. The sire of last named is Gov. C. by Black U. S. We have for sale an extra fine male of June, 1896, sired by him. 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.

HIGHLAND FARM HERD PEDIGREED POLAND-CHINAS.

Herd headed by Corwin I Know, a son of the noted Chief I Know 11992 S. Corwin I Know won second as a yearling at Iowa State fair in 1897. Weighed 600 pounds at 13 months. Assisted by Hadley U. S., a son of Hadley Jr. 13314 S.; dam by Mosher's Black U. S. 25 Brood Sows—Kiever's Model, Look Me Over, Chief I Know and What's Wanted Jr. breeding. Inspection and correspondence solicited.
John Bollin, Kickapoo, Leavenworth Co., Kas.

Mains' Herd Poland-Chinas

Headed by the three grand breeding boars, Model Combination—his sire was J. D. Model, he by Kiever's Model 14664 out of McKelvie's Lass 42107; his dam Lady Chief 42019, she by Chief Tecumseh 2d 9115 and out of Ralph's Pet 42788; One Price Chief—his sire Chief Tecumseh 2d 9115, his dam Alpha Price 33785, she by One Price 4207; Kansas Chief 33615—she by Royal Chief's Best and out of Bell O. 74594. The sows are all selected and equal in breeding and quality to any. A few sows bred will be offered. Young males and gilts ready. Satisfaction guaranteed.
James Mains, Oskaloosa, Jefferson Co., Kas.

ROSE CREEK JERSEY CATTLE

POLAND-CHINA SWINE
MAMMOTH BRONZE TURKEYS
and Silver Wyandottes are from premium stock. Turkey eggs \$2.50 for 9, Wyandottes \$1.50 for 13. (Farm in Republic Co., Kansas.)
H. WOODFORD, Mgr., Chester, Neb.

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 3 to 7 years old for sale.

Agricultural Matters.

SUGAR BEET INDUSTRY IN THE UNITED STATES.

The Secretary of Agriculture has just transmitted to the President for the information of Congress a very full report on the present condition of the sugar beet industry in this country, and of the operations of the department during the past season in relation thereto. The document consists of two parts, the first being a report from the chemist of the department, Dr. H. W. Wiley, in which the history of the industry is reviewed and giving a full account of the season's operations.

The principal distribution of sugar-beet seed the past season was made through the agency of the agricultural experiment stations, the directors of many stations having been appointed special agents of the department for carrying this method into effect. Seeds were also sent to about ten thousand farmers in different parts of the country, with full instructions for planting, cultivating, and sampling for analysis. These instructions were contained in Farmers' Bulletin No. 52, of which during the season nearly 150,000 copies were distributed. The samples for analysis were sent either to the agricultural experiment stations or to the Department of Agriculture. In all, about 2,300 samples were received for analysis at the Department of Agriculture.

NEW YORK AND MICHIGAN LEAD.

The best results were reported from the States of New York and Michigan. Other States in which reports were favorable were Wisconsin, Ohio, Indiana, Minnesota, Nevada, South Dakota, Wyoming, and Colorado. States giving fair results were Iowa, Nebraska, New Jersey, and Pennsylvania. In general it was found that after passing south of the mean isotherm of 71° F. for the three months of June, July and August, the results were poor. It is found that the belt of territory included between the limits of the isotherms of 71° and 69° may be regarded as the basic belt of the beet sugar industry. The best results are obtained within or north of this belt, other climatic conditions being favorable. Extreme northern limits of sugar beet culture are determined only by the advent of freezing weather.

A comparison of analytical data with the thermal area shows a remarkable agreement. In States so situated that their northern portions are in the favorable thermal area, while their southern portions are without, comparison of the analyses of the beets grown in the southern, central and northern portions of these States shows a regular gradation of excellence from south to north.

The conditions of growing beets under irrigation have been studied somewhat, but imperfectly. The data collected, however, are very reassuring, and lead to the evident belief that irrigated lands, under proper thermal conditions, will give most excellent returns with beets.

The report contains not only the analytical data obtained at the Department of Agriculture, arranged alphabetically by States and counties, but also of the data which have been obtained at the agricultural experiment stations during the year. In all instances the data obtained at the stations agreed very closely with those secured from the same States at the Department of Agriculture. These data from the experimental stations are collated and studied side by side with the data from the same States obtained from the Department of Agriculture, making a complete exposition of the results of investigations from all parts of the country. The collaboration thus secured between the States and the department has afforded the best possible results in the studies undertaken.

HIGH-GRADE BEETS.

Experiments were also conducted in the production of high-grade beets. Some of the high-grade seeds obtained at the station at Schuyler during the continuance of the work at that point were found to have sufficient vitality to continue their growth. Other high-grade seeds produced from specially analyzed beets were procured from European growers, and, in collaboration with six of the experiment stations, comparative tests were made of these seeds in various localities. The stations collaborating in this work were Tennessee, Kentucky, Indiana, Iowa, Wisconsin and New York. The best results were obtained from the stations in Wisconsin and New York. The beets which were grown at the New York station were carefully selected for physical properties, and those which reached the standard of shape and size were subjected to individual analyses

and preserved for the propagation of seeds for the season of 1898. In all, 800 beets were found to have the requisite qualifications for the production of seed, and these have been preserved during the winter in a silo and are to be distributed this spring to the various stations for seed production. A few of them which have exhibited peculiar strains of excellence have been preserved for the production of a new variety of beets, which it is proposed to call the American Elite. These beets have an average weight of about thirty ounces and an average content of sugar of 19 per cent. The purity of juices in similar beets was found to be about 85. These beets, having shown these remarkable variations from the standard in size and sugar quality, are evidently fitted to produce a new variety of beets better suited to American farmers than the standard beets of Europe. It is the intention of the department to endeavor to establish a variety of beets of this kind which shall have at least a third greater weight than the standard sugar beet of Europe without losing anything in sugar content or in purity of juice. The immense advantage of such a variety of beet for American growers is easily seen. The most successful scientific work in the future will come from placing the seeds in the hands of a few reliable persons in each locality and securing a careful supervision of their work by some accredited agent of a State experiment station or the Department of Agriculture.

The report contains a chapter on the value of the sugar beet and the beet pulp as cattle food, giving the chemical composition of each, the ratio between the nutrients, and its general value as a producer of milk and fat and as a sustaining ration.

FACTORIES AND PRODUCTION IN 1897.

The report closes with a chapter on statistics of sugar production in this country during the year 1897. During the season nine factories were in operation in the United States, namely, at Alameda, Los Alamitos, Watsonville and Chino, Cal.; Lehi, Utah; Eddy, N. M.; Grand Island and Norfolk, Neb., and Rome, N. Y. Forty-one thousand two hundred and seventy-two acres of beets were harvested, with an aggregate weight of 389,685 tons, a yield of almost nine and one-half tons per acre. This is less than the average in Europe, but with more scientific agriculture and judicious fertilization the yield in this country can doubtless be brought up to, if not above, the average of the best fields of Europe. The careful experiments of the New York Experiment Station, at Geneva, with beets grown in collaboration with the Department of Agriculture, resulted in an average yield of over sixteen tons of high-grade beets per acre.

The total amount of beet sugar made in the United States during the year 1897 was 90,491,670 pounds, an average of 232 pounds per ton of 2,000 pounds, or 11.6 per cent. of the weight of the beets. This is a less percentage than is obtained in Germany, but, considering the newness of the industry in this country, it is sufficiently encouraging. Reliable information shows that there will be in operation in the United States during 1898 seventeen factories, new factories being located in Utah (1), Oregon (1), California (4), Michigan (1), and New York (1). It is safe to say that at least 80,000 acres will be planted in beets during the season of 1898. The yield of beets may be expected to be nearly 800,000 tons and of sugar about 180,000,000 pounds. These estimates should be reduced somewhat to represent the proper output of beet sugar in the United States; they are sufficient, however, to show the rapid growth of the industry, which will experience an enlargement of not less than 70 per cent. during the coming season. The percentage of beet sugar produced in the United States during 1897 to the total consumption was only 2½, but the prospects are that in 1898 it will be nearly 4 per cent. of the total consumption, which now amounts to about 2,000,000 tons annually.

The second part of the report consists of a full account of the operations of the field agent, Mr. C. F. Saylor, who during the past season visited all the principal sugar beet manufacturing plants and factories, and recounts the result of his interviews with both growers and manufacturers. Mr. Saylor's paper concludes with answers from the practical men in charge of various beet sugar factories in response to a series of interrogatories concerning the more important features of the beet sugar industry.

FOR ALLAYING HOARSENESS AND IRRITATION OF THE THROAT, "Brown's Bronchial Troches" are wonderfully effective. Avoid imitations.

Points by a Practical Plowman.

By H. S. Matteson, in March Quarterly Report of Kansas State Board of Agriculture.

Being satisfied that there is some science in the matter of plowing, I propose to give a few points that, in my opinion, are worthy of some attention. To-day, in a drive of some twenty miles, I saw perhaps seventy-five teams plowing, and I think I am safe when I say that not ten of the seventy-five men following the plows knew how to scientifically hitch the team to a plow to do good work. A large majority were using whiffletrees that were too long to do good work, and almost without exception the horses were hitched too close to the plow. After following the plow for nearly forty years, here are some points in the matter of hitching to a plow that I have found to be necessary in order to do good work.

First, I want a set of whiffletrees the evenness of which shall be only twice the number of inches in length of the inches in width of furrow that I want to turn. Thus, if I want to plow a furrow of fourteen inches in width I will have an even twenty-eight inches long. Then, I want to let the team out from the whiffletrees to such a distance that I can get the depth of furrow I want and draw from the notch in the plow clevis at the lower side of the plow beam. The reason for short eveners and low hitch on the plow beam is, that the plow will draw level on its land side and will be in position to do its best work. With the average farm whiffletrees we find about a four-foot evenner. This, with the horse in the furrow, would call for the plow to run to the sod nearly two feet; the one holding generally rocks the plow to the left somewhat to keep his furrow narrow enough and thus puts the plow out of its natural position. The hitching above the lower notches in the plow clevis to get depth of furrow draws the plow too much on its point and a small stone will throw it out of its furrow. This calls for lots of backing up and hard work.

To me, plowing (except the matter of walking the furrow behind it) is one of the easiest, pleasantest parts of the farm work, and when I see a man, as I have to-day, stripped to shirt and pants, to all appearances struggling like a man in a wrestling match, I am always sure he does not understand the science of the plow.

Another thing I never do is to plow around a plat of ground and drive out and turn my team on the fresh, mellow furrow, to tread the soil down solid again after turning it up mellow and light. If sod ground, the harrow follows the furrows, and this makes two turnings on the same ground, and generally gives it a pretty good tramping down. My way is this: I pace or measure the plat I want to plow, find its width, and then divide it up into plats that shall be about equal in width, so that I may have each plat from eighteen to twenty paces wide. Set your marker stakes in a fresh line and plow in back furrows. To avoid a ridge where your back furrow is laid, my two first furrows are run about two inches more shallow than I intend to plow the field. Increase your depth of furrow on the second and third furrows, and you will have your ground in shape to level with the harrow.

The objection to dead furrows can be largely overcome by running your last two or three furrows more shallow, same as first furrows were run to avoid the ridge. Run the next to the last furrow for dead furrows half the depth of your main furrows, run the last furrow to about full depth, then go back and lay the rest of the soil left from next to last furrow which was shallow on to the last furrow as a dead furrow, and you have a loose soil to fill and largely even up your dead furrow; or, if you wish to plow downward a piece, get your measures of the size of plat, lay out your furrows in center of plat, and turn to the right with your team, keeping your fresh-plowed soil from under your team's feet; you save corner harrowing and have a more mellow seed-bed.

Unquestionably there is no liveryman in Minnesota more widely known than Mr. C. B. Dickens, of Minneapolis, who conducts one of the largest livery stables in the Northwest. Regarding Quinn's Ointment, Mr. Dickens says, "I have been using it for some time with great success and recommend it to my many friends. No horseman should be without it in his stables." For curbs, splints, spavins, windpuffs and all bunches give it a trial. If you cannot obtain it from your druggist write W. B. Eddy & Co., Whitehall, N. Y., who will send regular size for \$1.50; smaller size, 50 cents.

Send \$1.25 for Kansas Farmer one year and book, "Samantha at Saratoga."

The Stock Interest.

TUBERCULOSIS.

By U. B. McCurdy, V. S., Topeka, before Kansas Improved Stock Breeders' Association.

ITS PREVALENCE.

In scanning the report of the New York Board of Health we are brought to a realization of the great ravages of the most insidious, silent and deadly disease common to man and beasts. For the four weeks beginning January 18, 1896, and ending February 8, the report shows: Deaths from tuberculosis, 464; deaths from typhoid fever, scarlet fever, cerebral spinal meningitis, diphtheria, measles and smallpox, 365, showing ninety-nine more deaths from tuberculosis than from the other six diseases combined. In one year in New York City 14 per cent. of the 5,490 deaths were a result of tuberculosis.

Pleuro-pneumonia, the most dreaded of contagious diseases, is of a very rapid and fatal form, developing in from three to six weeks from the time of exposure, acute cases proving fatal in from ten to twelve days from first appearance of the disease. When the epidemic has run its course it can readily and positively be seen that the disease has been stamped out.

AN INSIDIOUS GERM DISEASE.

Tuberculosis, which is a slow and chronic disease, differs principally in the degree of its activity, being, generally, of much longer duration, many cases proving harmless. Frequently in the body of some apparently healthy animal it is almost impossible to detect dormant germs which are innocuous until by some debilitating disease the animal's vitality is lowered to such a degree that it is unable to further resist the otherwise harmless bacilli.

Tuberculosis is due to a specific germ known as bacillus tuberculosis, which is the exciting cause in all cases, and the disease is contracted by means of inhalation, ingestion and circulation, though more commonly by ingestion and inhalation.

HOW TUBERCULOSIS PROCEEDS.

Local affections of the organs through which the germs pass are usually the primary lesions presented and show different phases in different animals. It is of frequent occurrence that the organ giving passage to the germ remains unaltered and that the morbid process starts in the neighboring ganglions (bronchial and mesenteric) and later extends to the pleura and peritoneum.

At the point where the bacilli are arrested they first determine a formation of milary tubercles, which, by gathering, form pyramid-like masses. Sometimes these neoformations remain as localized inflammatory centers or become calcified; at other times they undergo a caseous degeneration in fibrous transformation; in some instances they suppurate, become ulcerous and produce cavities. When they become isolated by a connective-tissue proliferation from the surrounding parenchyma, or if they undergo complete calcification, the tubercles may heal.

THE USUAL DEVELOPMENT.

In the majority of cases the process becomes general. It may take place:

(1) By means of lymphatics. The ganglions which are next to the primary tubercles are first involved. In pulmonary tuberculosis the bronchial and mediastinal ganglions are involved; in intestinal tuberculosis the mesenteric ganglions, the spleen and the liver.

(2) By continuity or contiguity of tissue. This is a mode of propagation which is especially observed in mucous membranes. A pulmonary tuberculosis center which opens into the bronchi may be determined successively tuberculosis of the bronchial, tracheal and laryngeal mucous membrane, and deglutition of tuberculous matter may produce tuberculosis of the stomach and intestines. In tuberculosis of the kidneys or of the genital glands the process may extend to the genito-urinary mucous membrane.

(3) By means of the circulation. The bacilli may be disseminated through the whole system when the destruction of a tuberculous center leads to perforation of a vein, or when the process directly invades the vascular walls (W. L. Z.). Another means by which the blood becomes contaminated with the tuberculous germs is by inoculation of the subcutaneous tissue. This is mostly the experimental way and will be treated more fully under the head of tuberculin.

In speaking more particularly of the

predisposing causes of tuberculosis I will first consider heredity.

HEREDITY.

Among the wild herds of the plains tuberculosis is practically unknown, while among the cows of closely-confined dairy herds it is quite common. There is no proof of the direct inheritance of the disease, other than the transmission of weakened constitutions and lowered vitality; in other words, the transmission of hereditary susceptibility.

In-and-in breeding has the debilitating effect that is so congenial to the ever invading germ. This is readily demonstrated by an examination of the herds of cattle most susceptible to the disease and it is found that this disease is more prevalent with the in-bred variety.

On the contrary, the grade stock or cross between some thoroughbred and common stock, is less susceptible.

LACK OF VENTILATION.

Unsanitary conditions, as a matter of fact, are conducive to the spread and development of the disease. Close stabling, insufficient amount of air and sunlight, damp underground stables are all a great source of danger, and I believe this to be one reason why our Western herds are less contaminated than those of the East.

Overstimulation for excessive milk production, lack of exercise, with many other unnatural conditions which stock undergoes, lead indirectly to the contraction of the disease. It is generally conceded that all animals are, at some time in their life, exposed to the germ, and a large per cent. of them possess a greater or less number of the bacilli in their system. Many have constitutions and sufficient vitality with which they can resist the disease. But the weakened, hereditarily afflicted ones contract the disease, disseminate the germs promiscuously during their short lives and finally succumb to the inevitable.

RELATION TO PUBLIC HEALTH.

It is generally accepted that tuberculosis is directly communicable from man to beast, and vice versa. The micro-organism is identical.

Olivier and Boutet record an outbreak of tuberculosis in a boarding school. Cows were kept for the use of the establishment. It was found that one of the cows supplying milk during a certain period was tuberculous, and during that time six of the children contracted tuberculosis.

Strang gives another case. A boy aged 5 and born of healthy parents died from advanced tuberculosis of the mesenteric ganglia and military tuberculosis of the lungs. It was ascertained that he had been in the habit of drinking warm uncooked milk from a cow suffering from tuberculosis, as was proven by a post mortem.

Dr. Gosse, of Geneva, records another. His daughter was, at the age of 16, a strong, healthy girl and there was no trace of tuberculosis in the family. About ten months before her death she began to manifest signs of a mysterious illness which caused gradual wasting, and ultimately the patient died at the age of 17. At the autopsy it was found that the poor girl had suffered from intestinal and mesenteric tuberculosis. It was afterwards remembered that she was in the habit, when spending the Sundays on a small estate where cows were kept, of drinking warm milk almost direct from the cows. In consequence the cows were subjected to an examination and four out of the five were found tuberculous, and two of these had tuberculous udders.

There is strong proof of the transmission of the disease through the consumption of meats. Dr. Treon describes the animals furnished to the Northwest Indians as being poor, emaciated and diseased. The Indians eat the entire carcass, including the liver, tallow and entrails, fresh and without cooking. The animals are eaten, though they have died of tuberculosis, and 50 per cent. of the deaths in the reservation are from tuberculosis.

Dr. Peters reports a number of positive cases of direct infection and death from tuberculosis during the performance of his duties as chief inspector of cattle for the New York Board of Health.

Have not these tests given satisfactory proof that the cases were directly traceable to the consumption of milk and meat? The consumption of a great amount of milk from many dairy herds means the consumption of many millions of germs.

Look at the ordinary milker with his head against the cow's flank and notice the dropping of all kinds of filth into the milk bucket and you can readily see how the milk becomes contaminated with all kinds of germ life, to say nothing of

the germs that come from a tuberculous udder, of which there are many.

BACTERIA IN FILTH.

In the excellent article by Dr. Parker, in the April Journal, he quotes the following experiment from Dr. Potts:

"The cows were thoroughly cleansed with a solution of bichloride, the milkers being dressed in clean suits and the milk received into sterilized tubes. Before taking these precautions, in all of the four cows used in the experiment the very first milk drawn showed the following respective number of colonies of bacteria:

A.	B.	C.	D.
141	167	19	53

"In the remaining milk, drawn after these precautions were taken, there was no trace of bacteria. Thus it would seem that, as a matter of practical importance, it would be well to strip the teat once or twice before milking into a sterilized pail. In this way the micro-organisms which evidently find their way into the milk duct would be washed out. It also emphasizes the importance of cleanly surroundings for cattle."

(To be continued.)

The Color Question in Short-horns.

An order for a young Short-horn bull from Missouri and also from Kansas from two well-known breeders, and the stipulation that they must be red and from red sire and dam if possible, brings up very important questions regarding color. First, are reds as good handlers, as good doers, as thrifty, as full of quality as whites, roans or red-and-white? After many years of close observation and a thorough and intimate knowledge of my own herd especially, and of many individual animals in other herds, I am decidedly of the opinion that an indiscriminate use of animals because of their color, even if well bred, is a great mistake. No herd can stand it. They will depreciate unless the owner is a most skillful and determined culler of poor quality, no matter how fine a red the animal may be. My reason for this statement is that only one red in a dozen is of the quality in hair and handling that a sire at least should have. In our own herd with daily watchfulness this is about the ratio, namely, one red in a dozen has hair long and silky and consequently a mellow handler while under a year old; and very often this individual becomes disappointing in quality as he matures.

White is almost out of the question, but it should not be so, for we have noticed several white sires that were always creditable both as to quality in themselves and their produce, and skillful breeders do not hesitate to use a white sire when quality and form are found in sufficient abundance in the individual to justify his use. Then, color is so much under our own control that if one really wanted red produce even from a roan sire and dam a little trouble on the breeder's part will get it, and generally of the quality we want when the quality is present in the parents. After close observation of herds where red sires have been the rule, and not without some discrimination in choosing those sires, I have noticed a very dark and unthrifty red—almost approaching a brindle in many cases—getting almost black close to the hide, and certainly not a hide or hair of quality that would promise a good return for food consumed.

I do not say that all whites or roans are of good quality, but the proportion is so much higher that a good roan seldom disappoints one; in fact, I have often thought that blindfolded I could tell what my hand was on. Red-and-white; how I like to think of it! The best sire I ever bred or owned had a good sprinkling of it, and the white hairs always so long and silky spreading out over the red; in fact, superiority in the white spots seemed to impart its quality to the red, making the animal several points better, the white hair being longer and silkier than the red. For thrift and quality I have never seen his equal in our herd. The breeders of the West should think seriously over this matter. It is quality that makes the return in the majority of the herds and I am confident that any person willing to give attention to the matter of thrift and quality in his herd will soon decide for both in preference to a fancy red without those qualities. Solid reds can be had of quality, but I repeat that only one in a dozen as we find them to-day are of first-rate handling qualities, and to keep up this craze will end in disaster to many herds that might otherwise be profitable not only to their owners but to the whole cattle community of the great West.—Ontario Breeder, in Breeder's Gazette.

Sheep Department.

Conducted by J. CLARENCE NORTON, Moran, Kas., to whom all letters should be addressed.

About Raising Angora Goats.

Edwin Clump, of Nesbitt, Okla., encloses a sample of Angora goat wool which I think is a very good specimen, and asks a series of questions, which are answered by H. T. Fuchs, of Tiger Mills, Texas, in Texas Stock and Farm Journal, as follows:

"1. My general opinion of the raising of Angoras is that they are a most useful animal, especially in a brushy, hilly, rocky country, where they can get good, clear water to drink, and where they are not disturbed by dogs and wolves and where they are kept in dog-proof or wolf-proof pastures without a herder in small flocks—not over 300 in a flock; where they are cared for, if any care should be necessary; where they are salted twice a week and penned at sundown, and in case of rain driven under an open, airy shelter; where they are put on new range whenever the old range is eaten out, and where they are dipped in a solution that will not injure their eyes, but just strong enough to kill the little yellowish goat lice in case they should get lousy. I do not know if there is a hilly, rocky, brushy country in Kansas with good running water. 2. I think they are more profitable than any other stock if you can give them the above described range, etc. 3. Under the above described conditions they are, I think, the healthiest creatures in the world, and the most active, pretty and attractive animals I ever saw. 4. The quality of the range has a great deal to do with the development of the whole Angora industry. Every industry requires its special properties and conditions to reach a high state of perfection. The meat of Angoras and grades is the finest meat in the world, and the most healthy and clean tasted, free from that ugly taste you notice in sheep mutton and common goat, and the milk has also a splendid, clean taste, and is considered much healthier than milk from cows; it is very rich milk. 5. A few days ago a firm in New York advanced about 25 cents per pound on my mohair. As there is a tariff of 12 cents per pound on this mohair there is no probability of its going down in price, but rather a rise. 6. It takes a very good flock to yield over four pounds per year, but shearing twice a year is quite necessary. 7. They are not as expensive to handle as sheep, as they require no herder. 8. About one or two acres per head will be enough for six or seven years if there is a good deal of brush on the land. 9. Good bucks are sometimes sold at enormous prices, but I can sell extra fine bucks at \$10 each. 10. If any one doubts the value of the meat of these animals, he will soon change his notion after he has once tasted a roasted or broiled quarter of an Angora mutton. 11. The hair of half-breeds can already be used for making good, soft and very durable saddle girths. Of course it takes six or seven years to grade up a flock from common goats to a good shearing flock that produces mohair that is worth from 25 to 30 cents a pound; but for home use, the third and fourth cross produce good yarn for socks, mittens, etc. 12. In kidding time the doe should be left with its kid the first day, next day you may turn her out with the flock and keep the kids in the pen until they are at least six weeks old before letting the kids run with the flock. It is a good plan to put the does in a small pasture separate from the flock a few days before they bring kids. Now, I do not mean to say that all the above rules have to be followed as far as pasture, etc., is concerned. Just a few can be kept if they get the same feed that milch cows get, but they do better where they can run out on open range."

A Word Personal.

On account of the late spring I sheared twelve days late this year and finished on April 12 and shipped to St. Louis on the 13th. By the tone of many letters that reach me I see that many have an exaggerated opinion of me and my flock of sheep, and in order to set myself right before the public I want to say a few personal things.

I am not an old and wealthy farmer with large means, able to gratify every whim, one that writes to the papers and hires the work done, and pampers

Salt Rheum

Intense Suffering—Could Not Sleep—Cured by Hood's Sarsaparilla.

"I had salt rheum on my arms, which itched intensely and kept me from sleeping. The skin on my hands would crack open. My friends believed I was suffering from blood poisoning. I decided to take Hood's Sarsaparilla. I did not see any improvement with the first bottle but continued with the medicine and after taking five bottles I was completely cured. My hands are now as smooth as I could wish." A. D. HAGEY, Elroy, Pa.

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills are prompt, efficient and easy in effect. 25 cents.

a flock of registered Shropshire sheep.

I am a young man, considerably in debt, a renter on my father's place, which will be mine when he is through with it (and of course all improvements are put on by me just the same as if the deed was recorded in my name).

My sheep are not thoroughbred, except four of them, and they are roughed through as much as possible, as I have to scrimp all I can to pay my debts; and the record I append is all the more valuable on that account, as it shows other poor men just what I am actually doing. No doubt there are very many flocks of sheep in Kansas that show up a much better record than mine on account of a better chance than mine have, and I trust owners of such flocks will follow my example and print their clips.

My flock consists of fifty-three head—fifty-one ewes and two rams. They sheared 468 pounds, or an average of 8.8 pounds per head. I have had them average almost 10 pounds before this, but the wool contained clover seed and other trash from a slanting rack that caused it. Since I have adopted the perfectly perpendicular racks the wool is very clean, weighs less, but sells for more money per head. Here is my clip for 1898:

Fourteen yearling ewes, 126 pounds, average 9 pounds.

Eleven two-year-old ewes, 88 pounds, average 8 pounds.

Sixteen three-year-old ewes, 144 pounds, average 9 pounds.

Ten four-year-old ewes, 90 pounds, average 9 pounds.

Two rams, 20 pounds, average 10 pounds.

When the fourteen yearlings and two rams are left out, it leaves me thirty-seven head to have lambs, and they have thirty-five lambs up to date that have survived docking and trimming, with perhaps a few more to follow.

It will be seen that the two-year-olds shear the least. This shows that three and four-year-olds are the heaviest shearers when raising lambs.

Beware of Ointments for Catarrh That Contain Mercury.

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten-fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists, price 75c. per bottle.

No-To-Bac for Fifty Cents.

Guaranteed tobacco habit cure, makes weak men strong, blood pure. 50c, \$1. All druggists.

Reduced Rates to Grand Encampment Mining District, Wyoming.

The Union Pacific will sell tickets at one fare for the round trip, plus \$5, from all points in Kansas, Nebraska, Colorado and Utah to Rawlins, Wyo. Dates on which tickets will be sold are first and third Tuesday in May, June, July, August, September, October and November. Stage line daily except Sunday each way between Rawlins and Grand Encampment.

For full information call on or address F. A. Lewis, City Ticket Agent, or J. C. Fulton, Depot Agent, Topeka.

Thymo-Cresol

A handy, safe, sure cure for Scab, Lice, Mange, all skin diseases; all parasitic troubles; non-poisonous; needs no preparation; mixes instantly with cold water. Sample by mail 50 cents. LAW FORD BROS., Box M Baltimore, Md.

TICKS

ELECTRICITY WILL REIGN.

At the Trans-Mississippi and International Exposition, to be held in Omaha from June to November, electricity will play a most important and interesting engagement. The devices of invention, as yet but sparingly revealed to the public eye, will be there afforded for unrestricted inspection amid dazzling architectural creations. The most distinct mental photograph carried away by visitors, however, will result from the enchanted appearance of the grounds at night. It is then that electricity will reign.

The lighting of the exposition grounds and buildings has been consigned to the charge of Mr. Luther Stieringer, a well-known electrical expert who has been connected with the illustrations feature of all large expositions, and particularly at the World's Fair, where Mr. Stieringer was consulting electrical engineer. His original conceptions at Chicago were the delight of the thousands of visitors, the famous electrical fountain being an achievement unique and unsurpassed before or since. Mr. Stieringer has been in Omaha for some time working out the problems regarding the illumination which will be one of the principal attractions at the exposition grounds. Plans and designs have been adopted for an electrical fountain in the west end of the lagoon and lying directly before the noble buildings of the United States government, the work being sufficiently advanced to insure its certain completion before the opening day.

The electric fountain is designated

points of vantage blazoned with electric lights. Across the lagoon the Arch of the States is girdled with bands of light and the Liberal Arts building is vividly outlined along its cornices. The Mines and Mining building is especially adapted for this beautiful decoration and right royally has it been beribboned and festooned. Its graceful portico is clearly defined, the towers wear scintillating crowns, the windows shine as if revelry were within. Facing this structure is the palace of Machinery and Electricity, with all effective points penciled in light. The east end of the lagoon, in front of the last two mentioned buildings, in company with the adjacent terraces, landings and broad viaduct leading away from it, is brilliantly lighted by incandescent lamps supported by fanciful standards of special design.

Suddenly a dazzling finger of light carries the observer's attention back to the starting point. There the ray of a powerful search-light is seen shooting from the torch in the hand of the heroic figure, "Liberty Enlightening the World," which surmounts the Government building. Liberty's body is jewelled with incandescents, about her head is a scintillating tiara, and the upheld torch is encircled. Beneath the figure several lines of light completely encircle the cupola above the dome. Streamers of light cover the dome, apparently held to their places by five-pointed stars on either side of the dormer windows. Below these another line of light completely surrounds the base of the dome. Arising from the roof of the central portion of the building a series of flambeaux sup-

Gossip About Stock.

The Missouri Stock Growers are to hold a State convention at St. Joseph, Mo., on May 10.

F. P. Maguire, Haven, Reno county, Kansas, has become a member of the Standard Poland-China Record Association. He writes that his Black U. S. pigs are nice in color and quality, and the herd generally hard to beat.

The Drovers' Telegram states that W. P. Norton, of Hopkinsville, Ky., has bought of Charles Patterson the grand thoroughbred, Ornament, and the unbeaten two-year-old filly, May Hemstead. The price for the two is supposed to be \$35,000.

J. M. Turley, breeder of Poland-Chinas, Stotesbury, Mo., writes that he has been very busy with the King Hadley litters, which are doing finely. There are now on hand sixty fine pigs, the get of the four herd sires, and more to follow. Mr. Turley has sold out all gilts that are bred, but has on hand forty-six head of fall pigs that are good in any company and well worth the money asked.

The Texas (Fort Worth) Reporter states that cattle are on the move. There is no doubt about that fact. The Santa Fe and M., K. & T. moved from south Texas to points in the Territory close to 40,000 head in one day during the week. On Saturday, the 9th, the Santa Fe had returned from the north thirty-seven trains of empty stable cars bound for southern points on their line, and on the same day the road had twenty-five trains of stock billed for the Nation.

Joseph Reppard, of the firm of Rep-



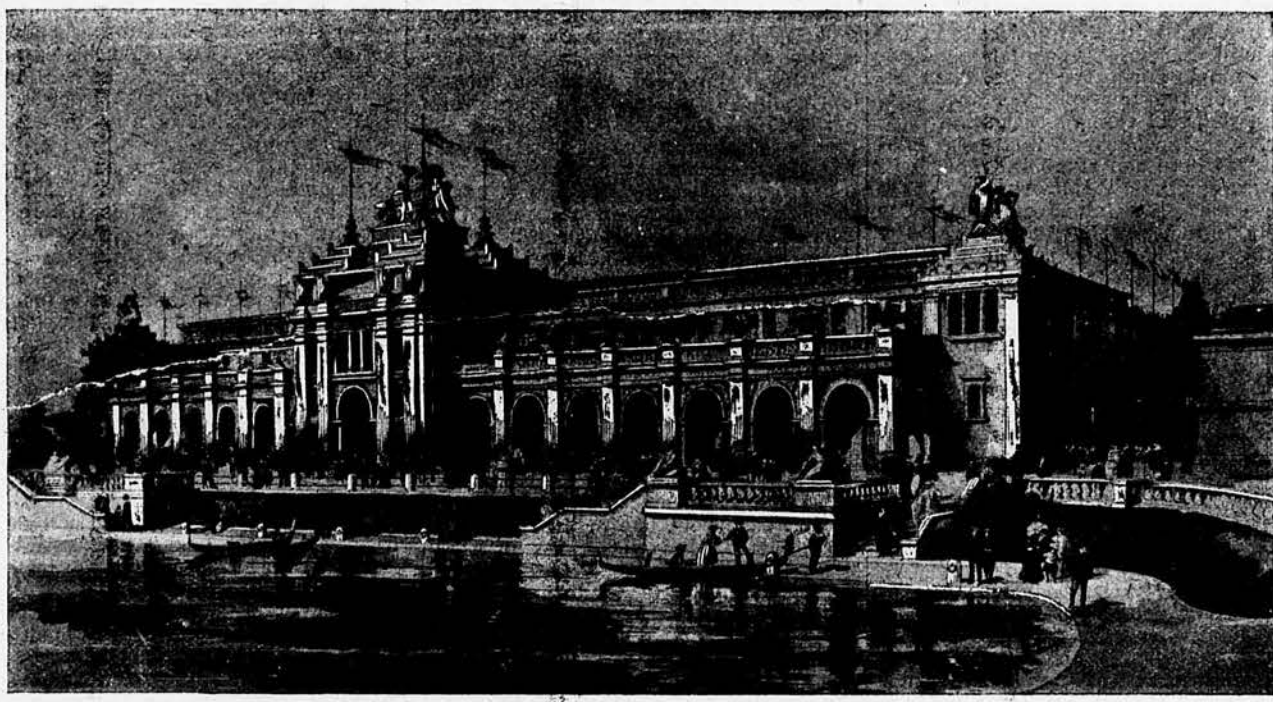
The athletic woman is the woman of the day. The past twenty years has seen wonderful progress in this respect. That this tendency will result in a more robust womanhood, better able to bear the burdens and duties and pleasures of life, there can be no question. But this result will be accomplished by the building up of those women already in reasonably robust health, and the killing off of their weaker sisters.

Athletics will make a naturally strong woman stronger and healthier; they will make a naturally weak, sickly woman weaker and more sickly, and if indulged in to excess, may result fatally.

A woman who suffers from weakness and disease of the delicate and important organs distinctly feminine, cannot hope to recover her general health through athletics, so long as she remains locally weak. A woman suffering in this way is unfitted to bear the strain of athletics just as much as she is unfitted to bear the duties and burdens of wifehood and motherhood. There is a sure, safe, speedy and permanent cure for all disorders of this description. It is Dr. Pierce's Favorite Prescription. It acts directly on the organs concerned in wifehood and maternity, making them strong and healthy and vigorous. It soothes pain, allays inflammation, heals ulceration and tones the nerves. It fits a woman to indulge in, and be benefited by, athletics. All good medicine stores sell it.

"Your valuable 'Favorite Prescription' cured me of female weakness and a catarrhal discharge from the lining membrane of the special parts," writes Mrs. T. H. Parker, of Brooklyn, Jackson Co., Mich. "I am now perfectly well."

Dr. Pierce's Pleasant Pellets cure constipation. Constipation is the cause of many diseases. Cure the cause and you cure the disease. One "Pellet" is a gentle laxative, and two a mild cathartic. Druggists sell them, and nothing is "just as good."



MACHINERY AND ELECTRICITY BUILDING

Trans-Mississippi Exposition, Omaha, Neb. Open June to November, 1898.

"Nautilus." Neptune is seated on high, viewing his realm with regal dignity. Before him riot his captive waters in holiday attire, assisted by the rainbow subjects of a rival sovereign. Innumerable sprays of vari-colored crystal fluid dart forth in rapid sequence, now bursting into flaming red, then quieting to subdued mother-of-pearl, and again offering a bouquet of myriad shades to the water god.

A careful study of the illuminating plans of the grand count shows a great array of incandescent lights. Every building is outlined with the glowing bulb. Along cornice, around window, on pillar, dome and at water edge the gleaming firefly of the electrical world makes radiant the view. Fairyland is before us. At the west end of the lagoon stands the Government building, the salient points of its architecture made distinct by electric star points. On either side are defined the colonnades which connect the Government building with its sister buildings on the right and left by pillars of light. To the left the Fine Arts building rivets the attention with domes light encircled, cornices ablaze, pillars and pilasters illuminated. Opposite, across the gently rippling water mirror, is the classical Agricultural building. It presents a brilliant opportunity for incandescent decoration. The upper lines, including the balustrades, and the imposing entrance and corner towers, stand revealed by numerous electric punctuation points. The Administration Arch shows its lofty spire outlined in symmetrical lines of light to the uppermost point. The Manufactures building has the prominent roof cornices, caps of columns, pedestals, and other

ported on shafts of artistic design cast their radiance on surrounding objects. The allegorical figures on the upper cornices and flanking the dome are outlined harmoniously and effectively. Clusters of lights border the mirror and in the center of this charming scene plays the electric fountain "Nautilus," bombarded from an invisible source with light ever-changing in color and of great intensity, enshrined in luminous floating lilies.

To describe the scene adequately is impossible. It must be seen in its pristine glory to be appreciated. Each visitor to the Trans-Mississippi and International Exposition will have a sensation of pleasure from the sight at night which the most impressionistic artist could never convey to canvas and which the faithful and trustworthy camera could never reproduce.

Catarrh in the head, that troublesome and disgusting disease, may be entirely cured by a thorough course of Hood's Sarsaparilla, the great blood purifier.

Hood's Pills cure nausea, sick headache, indigestion, biliousness. All druggists. 25c.

The Nickel Plate Road

Is authorized to sell tickets to Rochester, N. Y., and return at one fare and one-third for the round trip, on certificate plan, account of Baptist anniversaries, May 16-24, 1898. Three through express trains leaving Chicago daily from the Van Buren street passenger station. Fast time and first-class equipment. Rates always the lowest. Call on or address J. Y. Calahan, general agent, 111 Adams St., Chicago, Ill.

pard Bros., of Buffalo, N. Y., has made arrangements to make Kansas City his headquarters for buying horses and mules, and will be permanently located here with offices in the Grand Avenue Horse and Mule Commission Co.'s barns. The firm of Reppard Bros. does a large business in this line and their selection of Kansas City as one of their buying stations is another indication of the consideration in which this market is held by outside dealers.

Bids on the second call for 1,000 pack mules were opened at St. Louis last week. The bids ranged from \$93 up. The Maxwell-Crouch Mule Co., it is understood, secured the contract at about \$93 per head. The erroneous reports by some of the city papers saying that bids hereafter would be limited to States outside of Missouri are proven to be false by the fact that the bids opened yesterday were open to the whole country. Not a single bid was received, however, outside of Kansas City and St. Louis.

Burton & Burton, of "Shawnee Lodge" farm, Topeka, who have been advertising the Kentucky gaited saddle horse Eagleite, write that they have already booked sixteen services at \$25 each, and say: "We did not intend to approve more than fifteen, but may have to go to twenty. This patronage shows two things—the value of an advertisement in the Kansas Farmer and that Kansans appreciate a good saddle horse." They have not been able to fill all orders for Indian Game eggs and Toulouse geese eggs.

Robt. J. Evans, Secretary of the National Duroc-Jersey Record Association, writes from El Paso, Ill., that the entries

for Vol. IV of their records closed April 1, with 2,300 entries. One thousand of these were made since January 1, and more than 500 in March alone. The 200 shares, comprising the original capital stock, have all been sold; there are, however, a few stockholders holding several shares who may be willing to part with shares to those desiring to join the association. Vol. IV will be issued in May.

J. T. Lawton, breeder of Improved Chester-White swine, formerly of Topeka, but now of Burrton, Kas., writes: "My stock is in prime condition and I have some very choice spring pigs from Klondike, the boar I bought last fall at a long price. I recently shipped a choice boar to A. E. Staley, Ottawa, Kas.; also a bred sow to Beaver City, Neb. I recently purchased two fine Light Brahma cockerels of the noted Shaty strain. For a limited time I will sell eggs at \$1 per setting, or two settings for \$1.50."

Entries are being received for the combination sale to be held May 18, 19 and 20, by Wolcott, Beers & Co. and Erwin, Grant & Piper, at Kansas City. So far about thirty head have been entered. Entries close on the first of the month, and dealers contemplating sending in stock for this sale have no time to lose. The war is responsible for the rather slack interest so far exhibited. Dealers are simply standing still and making no effort to prepare stock for such sales. However, advices from the probable consignors indicate an interest that is encouraging to the promoters, considering the general depression in horse circles. Every effort possible is being put forth, and the promoters express their confidence in a successful sale. The combination sales to be held next month will probably be the last to be held this summer, and will be the last chance for such an opportunity for selling high-class horses. The entries are being limited to high-class stuff only, and the offerings are expected to be as good or better than in the last sale. The force of buyers from outside points promises even thus early to be good, and taken with the increasing interest manifested by local fanciers, there should be no trouble in disposing of all the horses entered. Applications for entry blanks and all information should be addressed to either Erwin, Grant & Piper, or Wolcott, Beers & Co., at Twenty-third and Grand avenue.

If cattle are eating fence rails, old boots, etc., it is indigestion. Change the feed, especially if you have been feeding the dry fat-forming foods.

Home-Raised Cattle Preferable.

By Albert Rogier, Matfield Green, in March Quarterly Report of Kansas State Board of Agriculture.

One of the foremost considerations in beef production in our locality is that we, as stock-raisers, should grow our own stock. This I regard as a very important matter. The large number of failures in the cattle business here, as elsewhere, points to the fact that we, as farmers, are not sufficiently well acquainted with the effects of acclimation and domestication of cattle brought from any great distance to the South or West. In other words, we are unfamiliar with the amount of shrinkage likely to occur during the period of adjustment to climatic and other conditions. Nor do we understand the laws of growth of these foreigners, and compare them too favorably with well-bred animals at home.

I could enumerate many stockmen and farmers who have nearly bankrupted themselves, largely on account of their unfamiliarity with the growth and development of these Western breeds. Again, quite a number of farmers came to the conclusion some years ago that it did not pay to keep a cow herd; that the amount of feed and care they required rendered them unprofitable; that steers which they wanted could be bought cheaper than raised. These very same farmers are now struggling to develop their cow herds, and a good herd of them is envied almost above anything else on the farm.

This is another reason why it pays to keep right on raising one's own cattle. Nearly every farmer who has done so is less subjected to financial embarrassment, because he is more able to make accurate calculations of his income. Then, again, some stock-raisers think there is always money to be made in full-feeding, when it very frequently happens that the steers full-fed would have netted the owner more clear cash if they had been sold off of grass. It is now apparently more profitable here to sell steers between two and three years old, whether full-fed or sold off grass. Usually four or five times as much pork as beef can be produced with the same amount of corn, and this should be taken into account in an intelligent comparison with beef production in its most economic sense. Usually well-bred cattle make the most gain, and sell for a higher price than scrubs.

We are wonderfully blessed in this locality with an abundance of good native pasture, with water supply, usually ample for all purposes, adjacent the grazing territory. Clusters of shady elm trees exist at convenient intervals along the small streams, furnishing plenty of shade during the hot summer days. Alfalfa and the sorghums produce excellent crops on our bottom lands, and occasionally large crops of corn are produced, making this country unsurpassed, almost, for beef production from the best-bred Short-horns or Herefords. I do not think it advisable to feed in the timber along the streams, as by this means a very large part of the manure produced on the farm is worse than wasted, being carried away by periodical overflows. To scatter feed around promiscuously in the timber during all kinds of weather is certainly wasteful, and hasn't as many points to recommend it as feeding out in the pastures, where cattle can collect for protection on southern hillsides, out of the wind, and have, at least, some old grass to lie down upon. This is especially necessary during the calving period, during the early spring season. The pasture will then get the benefit of the waste, at any rate.

In general, my opinions of the best methods of beef production in our locality are: Hang on to the cows; breed them up; cull out the poorest and sell them while prices are good; sell the steers off grass, if prices do not justify full-feeding at present cost price of corn. In other words, pick your full-feeding period with intelligent discrimination and precaution. Feed well, on a variety of well-taken-care-of forage—alfalfa, sorghum, Kaffir corn, or corn fodder. In my judgment, a prairie pasture is superior to a timber lot for feeding purposes, in a hilly country like ours. Raise only the better breeds, and keep acquainted with the markets, for the advantage of a good sale, either at home or at the nearest market, is apparent to every one.

It makes but little difference how well bred a horse may be, he must have good individuality to bring the top price of the market. Breeders cannot ignore the fact that the public in general consume the horse supply and fix the prices. But few gentlemen would pay a long price for a pedigree unless the animal was for breeding purposes, but when it comes to size, style, action and conformation

that make up the perfect individual, the public is willing to pay full values. Horses ought to be bred with a view to avoid coarseness and defects in the conformation, as quality and finish are the characteristics which give value to the gentleman's driver.—Chicago Drivers' Journal.

Singular Hebrew Burial.

A singular ceremony was performed recently in Brownsville, L. I., the most exclusively Hebrew settlement in the world. It concerned the burial of a man who died in such poor circumstances that his family was too poor to bury him in any one of the consecrated Jewish cemeteries termed fields, such as the field of Zion, the Field of Salem, the Field of Macpelah.

The name of the deceased man was Nathan Rubeuns, and his remains were laid out in a room at No. 280 Belmont avenue, covered with a white sheet. He had belonged, as does every Jew in Brownsville—orthodox or heterodox—to a burial society, but not having been able to pay his monthly dues he was not in good standing. His family was therefore not entitled to the usual burial fees and, as a Jew has an intense horror of being interred in any but consecrated ground, his widow rent the air with her lamentations.

"Oh," she cried, as she threw ashes on her head, "shall the descendants of Abraham, of Isaac and of Jacob lie in a grave defiled by the dog and the gentile? Woe is me and shame on the house of my fathers!"

Thus she continued until nightfall, when a committee of the Sinai lodge, accompanied by a rabbi, entered the room, and ranging themselves round the body,

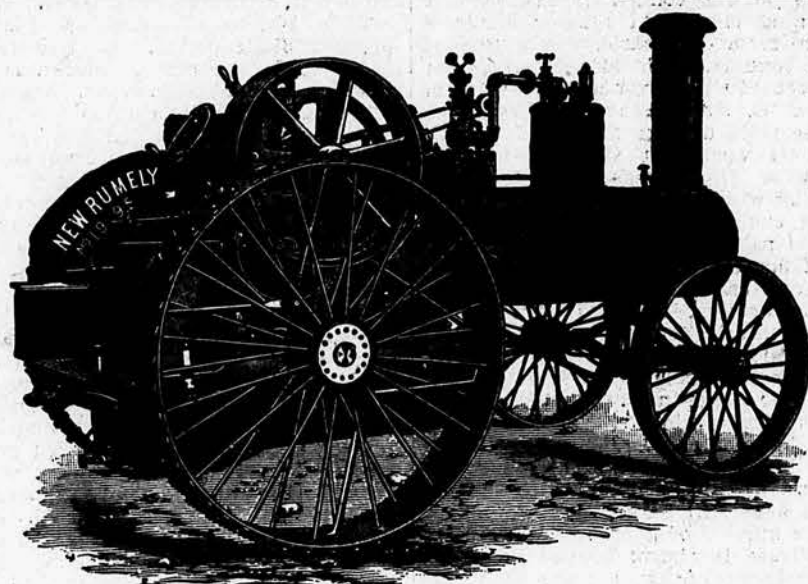
the body of Nathan Rubeuns, an orthodox Jew, who died in poverty. Who will subscribe to a fund for his burial? Olah! Olah!"

Pennies, nickels and dimes were thrown into the box, until it became so heavy that the sponsor, hoarse with his exhortations, was obliged to change it frequently from one hand to the other. In this manner the pathetic procession moved from house to house and from street to street until a thorough canvass had been made. When the box was opened in presence of the committee it was found to contain \$31.21, the largest coin in the collection being a quarter.

Nathan Rubeuns was buried in consecrated ground next day. His remains were followed to Field Sinai by a modest but respectable cortege. It is said that this was the first ceremony of the kind ever witnessed in this country.—San Francisco Call.

Traction Engines for the Farm.

No valuable piece of machinery is invented and perfected in a day. It is not designed by accident, but is the result of long years of experience and an intimate knowledge of the needs of the public. Fifty years ago people knew that steam power was preferable to horse power on the farm, but they did not know how to apply the steam. When the traction engine first appeared they found that its first cost was very much greater than the price of a horse, and they did not stop to consider that the engine never got tired and did not need to be fed all winter when it was not at work. So great are the advantages of this machine that the people could scarcely believe that it would fulfill its claims. For nearly half a century the M.



THE RUMELY TRACTION ENGINE. Made by the M. Rumely Co., La Porte, Ind. □

ordered the widow to depart. The rabbi then read from a scroll the rules governing such a case in the days of Israel's glory, after which he said:

"Brethren, this man must be interred." "He must be interred," echoed the committee.

"He shall be interred in consecrated ground."

"In consecrated ground," repeated the committee.

"Who here present will stand sponsor for the deceased?"

"I shall stand sponsor," answered Jacob Hyman.

"Was deceased of the faithful?" demanded the rabbi.

"The deceased, Nathan Rubeuns, was an orthodox Jew of the tribe of Benjamin."

"Did he obey the laws as delivered to Moses on the mount?"

"He obeyed them as well as an erring mortal could."

"Why did he not save money for his burial?"

"He had been ill and unfortunate."

"Do you as his sponsor promise that he will repay with his prayers those who bury him in consecrated ground?"

"I promise."

"Do you promise that his heirs will repay the money when they are in a position to do so to the nearest Hebrew synagogue?"

This promise was also given and then the rabbi said:

"He shall be buried. I appeal to the charity of the children of Israel."

The committee departed, and next day a hearse, bearing the remains of Nathan Rubeuns, enveloped in a black shroud, was moved slowly through the streets of Brownsville, a man in front leading the horse, and the sponsor in rear carrying a padlocked tin box with a slot in it.

"Children of Israel," the sponsor would cry in front of every house, "here lies

Rumely Co., of La Porte, Ind., have been making machinery for the farmers, and every season has seen some improvements in the product of their factories. The traction engines manufactured by them stand at the head of their class in strength, beauty and general usefulness on the farm or highway. The public demands of this machinery that it have easy steaming qualities, simplicity and strength in all its parts. The very best steel must be used in the manufacture of the boiler and the fire-box must conserve the heat to the largest possible extent. These are the strong points of the Rumely traction engine. It is built of the best material and so designed as to be heaviest where the hardest strain comes. The speed at which the engine travels over the road may be regulated independent of the speed at which the fly-wheel is revolving—a friction clutch controlling the traction gearing. By referring to the accompanying illustration it will be noticed that the slides, cross-head and all gearing are enclosed so as to make them absolutely dust-proof. The wearing parts may be readily removed and replaced when needed. The axle being at the rear of the boiler makes it impossible for the engine to tilt up when making an extra heavy pull. Engines manufactured by this company are of from eight to twenty horse power, and are well made, simple and easily operated. A handsome illustrated circular has been recently issued by the Rumely Co.

Don't Tobacco Spit and Smoke Your Life Away.

To quit tobacco easily and forever, be magnetic, full of life, nerve and vigor, take No-To-Bac, the wonder-worker, that makes weak men strong. All druggists, 50c or \$1. Cure guaranteed. Booklet and sample free. Address Sterling Remedy Co., Chicago or New York.

Oil meal in the spring, fed to horses, makes a glossy coat.

The Nickel Plate Road

Is authorized to sell tickets to Cleveland and return at one fare and one-third for the round trip, on certificate plan, account of meeting of Women's General Missionary Society of the United Presbyterian Church of North America, May 10-13. Tickets will be good on any of our through express trains, leaving Chicago from the Van Buren street passenger station at 10:35 a. m., 2:55 p. m. and 10:15 p. m. First-class equipment. Day coaches in charge of colored porters. Rates always the lowest. Call on or address J. Y. Calahan, general agent, 111 Adams St., Chicago, Ill.

Feeding oil meal requires the very best of judgment. It may be fed recklessly to the great injury of an animal.

Among the Ozarks,

The Land of Big Red Apples, is an attractive and interesting book, with views of south Missouri scenery. It pertains to fruit raising in that great fruit belt of America, the southern slope of the Ozarks, and is of interest to fruit growers and to every farmer and homeseeker looking for a farm and a home. Mailed free. Address J. E. Lockwood, Kansas City, Mo.

A fool handling a colt or calf will make a fool out of the animal as sure as preaching. It requires a self-possessed man to handle stock profitably.

Supreme Council of the Royal Arcanum

Will hold a meeting in Cleveland, Ohio, May 18-25, for which the Nickel Plate road is authorized to sell tickets at one fare and one-third for the round trip on certificate plan. Unexcelled dining car service. Vestibuled sleeping cars and day coaches are in charge of colored porters. Rates lower than via other lines. Three through trains daily from the Van Buren street passenger station, Chicago, Ill. For detailed information call on or address J. Y. Calahan, general agent, 111 Adams St., Chicago, Ill.

That bullying steer or cow would be benefited, and the rest of the herd certainly would be, by an application of a fine-tooth saw at the base of the horn.

RATES TO OMAHA.

Railroads More Liberal Than to the World's Fair at Chicago.

Rates and arrangements on account of the Omaha exposition have been completed by the Western Passenger Association lines. The rates are more liberal than those made for the Chicago exposition.

Summer tourist tickets will be sold at 80 per cent. of double locals to Omaha from all sections of the country, with final return limit to November 15.

From all association points east of Colorado a rate of one fare and a third for the round trip will be made from June 1 until October 30, with a thirty-day return limit, provided, however, that in no case the rate from the following points to Omaha shall be less than \$20 from Chicago, \$17 from Peoria, \$17 from St. Louis, \$25 from Colorado common points and \$15.75 from St. Paul and Minneapolis.

For the opening ceremonies a rate of 1 cent a mile will be made from all points within 150 miles of Omaha. From points beyond the 150 mile limit the rate will be one fare for the round trip. All tickets of every character through Omaha, in either direction, will be made good for stop-over at Omaha not to exceed five days. The minimum rate for any round trip ticket is to be 50 cents.

Churn when the cream is ready. The ferments which produce the fine flavors in butter are short-lived and are quickly succeeded by others. The cream which has the proper ferment in the morning may be past that point in the afternoon, and quite another flavor results. Here is the ground of failure with very many.

Baptist Anniversaries--Rochester, N. Y., May 16-24, 1898

The Nickel Plate road is authorized to sell tickets to Rochester, N. Y., and return at one fare and one-third for the round trip, on certificate plan, account above meeting. Tickets good on any of our through express trains leaving Chicago from the Van Buren street passenger station at 10:35 a. m., 2:55 p. m., and 10:15 p. m. Vestibuled sleeping cars and unsurpassed dining car service. Colored porters in charge of the day coaches. You will save time and money by patronizing the Nickel Plate road. For further information call on or address J. Y. Calahan, general agent, 111 Adams St., Chicago, Ill.

The Home Circle.

NORTH AND SOUTH.

This one fought with Jackson and faced
the fight with Lee;
That one followed Sherman as he galloped
to the sea;
But they're marchin' on together just as
friendly as can be,
And they'll answer to the roll-call in the
mornin'!

They'll rally to the fight,
In the stormy day and night,
In bonds that no cruel fate shall sever;
While the storm-winds waft on high
Their ringing battle cry:
"Our country—our country forever!"

The brave old flag above them is rippling
down its red—
Each crimson stripe the emblem of the
blood by heroes shed;
It shall wave for them victorious or droop
above them—dead,
For they'll answer to the roll-call in the
mornin'!

They'll rally to the fight,
In the stormy day and night,
In bonds that no cruel fate shall sever;
While the storm-winds waft on high
Their ringing battle cry:
"Our country—our country forever!"
—Inter Ocean.

FUNERAL REFORM.

By Dr. Henry W. Roby, Topeka, Kas. Read before
the Topeka Ministerial Union, April 18, 1898.

In making an exchange of places between pulpit and pew to-day, it will be my pleasure to give you all the traditional rights of the pew. You can sleep if it suits you; you can gaze at the new bonnets if they have more attraction than the preacher; you can let your minds wander away to Spain or Cuba if you find my subject less attractive.

I have always wanted to preach a funeral sermon, but never before had the call to preach; and if to-day I could in reality preach the funeral sermon of all false and injurious phases of our modern funerals, which have been dragged along from pagan times, I should not have accepted your call in vain. I should be delighted to stand and hear the clods of the valley rattle in Scripture measure upon the coffin-lid of some ancient and barbaric customs which still cling to us.

The thing we call by the various titles of habit, or custom, or fashion, or mode, is responsible for much of the unseemly in modern funerals as well as ancient ones. In "Two Gentlemen of Verona" Shakespeare exclaims: "How use doth breed a habit in a man!" An old proverb tells us that "we are the creatures of habit," and we seldom take the trouble to deny the indictment. Who dares to slap fashion in the face will have his hand blistered. We bow to the far-off and say "dear bought and far fetched is fit for the king." So we cherish the customs of the ancients and say that everything pertaining to the dead is sacred and no innovating hand shall touch it. But in the lapse of time the most brutal, the most horrible, the most outrageous and the most inconsistent and inconvenient customs do gradually break and fade out.

The old barbaric and medieval customs of charms and amulets, of exorcisms and incantations, of hot irons and dripping lancets have practically all disappeared from the medical practice of the world. The medieval methods of trying men charged with crime by giving them deadly poisons, or by making them walk barefoot over hot plowshares or sharp swords, and if they escaped unscathed declaring them innocent, and if not then declaring them guilty, have passed out of the world's judicature. The not very remote custom of burning people at the stake for witchcraft, heresy and unbelief is so nearly obsolete that there seems far less need than formerly of that place of punishment Mr. Beecher is said to have abolished.

But can we say as much for the old mortuary customs of the world? Do we not still cling to the sackcloth and ashes and all the emblems of an utterly hopeless woe handed down from some epoch more ancient and chaotic than the babbling tongues on the plains of Shinar?

The Egyptians first and then the Greeks and Romans in pagan despair of the dead flung about their mortuary ceremonials all the emblems of hopeless darkness and endless despair they could invent. Their lack of hope in the future was symbolized by the darkest emblems they could devise, and the spirit of barbaric ceremonials and splendors came in to add to the dangers and discomforts of dying. The heartless emulations and ostentations of wealth added always something more pretentious to the out-

ward display, and that caused the less fortunate to resort to tawdry shams and pretenses in order to seem rivals of the rich.

The Egyptians embalmed many of their dead and thus converted them into objects of personal veneration. (Some of them, so distinguished, reign in our dime museums to-day.) In India they were mostly laid away in sepulchers or burned. In China the dead were buried in the ground. Greece burned most of her dead. Hector was burned before the gates of Troy and Sylla was burned at Rome, and to-day funeral urns lie thick along the Applan Way.

Later in history Byron describes in a dozen lines the death and burial of George III. He says:

"A better farmer ne'er brushed dew from lawn,
A worse king never left a realm undone!
He died! his death made no great stir on earth;
His burial made some pomp; there was pro-

fusion
Of velvet, gliding, brass, and no great dearth
Of aught but tears, save those shed by collu-

sion.
For these things may be bought at their true
worth;

Of elegy, there was the due infusion
Bought also; and the torches, cloaks and banners,
Heralds and relics of old Gothic manners,
Formed a sepulchral melodrama.

Of all
The fools who flocked to swell or see the show,
Who cared about the corpse?

The funeral
Made the attraction, and the black the woe."

Coming down to our own times we find similar conditions prevailing. In the year 1894 one of our city papers published this dispatch:

"Paris, June 29.—The streets around the Elysee presented a somber aspect last night. All the lamps were covered with crape and the very walls of the palace are covered with funeral emblems. Within, the court of honor presented a striking and impressive appearance. The colonnade was completely draped with mourning cloth. At regular distances draped from the entablature were long black banners, bordered with silver and ornamented with silver wreaths, with the letters 'R. F.' (Republique Francaise) on the main drapery and the letter 'C.' (Carnot) worked in silver at frequent intervals. High overhead on the main building was a huge emblazoned colored shield encircled with the motto 'Honneur et patrie' and bristling with a forest of flagstaves, tri-colors, rosettes, ribbons and crape.

"A chapel ardente has been erected at the interior entrance of the court. The catafalque will be in the form of a small Greek temple with Corinthian columns, the whole in black and silver arabesque ornamentation. The base will be of the same color. The coffin will also be of black and silver. Enormous candelabra, wreaths of immortelles and national flags will be grouped around.

"The number of floral wreaths sent to the Elysee is almost beyond computation and some of them are of great value. One sent by a society of French women cost \$1,000. The florists of Paris, according to estimate, have already received orders for \$300,000 worth of floral emblems to be used in different ways during the funeral."

Here we find, only four years ago, a dazzling display of ancient Greek and Corinthian ceremonials, with \$300,000 spent for flowers alone, and probably a million for other portions of the display. At Gambetta's funeral Paris spent \$100,000 for flowers and much more for gaudy trappings. Our own Garfield had \$100,000 worth of flowers for his funeral and all else to match, including cigars, champagne, barbers, bootblacks, crape, gloves, neckties and chefs with groaning tables for the public mourners whose salaries went right on out of the public purse. Grant's funeral was far more elaborate and costly. It is estimated that, all round, the floral tributes cost \$350,000, and mourning emblems three to four times as much. I have not found the estimates on Lincoln's funeral. But most of you remember how gorgeous it was. The land was draped from end to end, from sea to sea,

And all the blossoms in the land
Were heaped and banked on every hand.

Who of us dares to raise a protesting voice against such national expenditure and extravagance? We seem to feel that our funeral trappings, in their splendor and cost, give the exact measure of our inward grief, and if one says aught against them he is attacking grief itself. A Senator must have as fine a funeral as a President; so must a Cabinet minister. A Congressman is as honorable a public functionary as a Senator and gets the same pay and the same funeral (if nobody objects). Then pride and emulation lead the Sergeant-at-arms and the Clerk and the Public Printer and a mile of other sub-functionaries to demand as fine funerals as Congressmen. They do not always get what they clamor for, chiefly because the public purse is not



long enough. But they tap the till for all it will yield. Then everybody else, being equally important with these, wants equal testimonials of grief for themselves and their friends so as not to be disgraced in the grave.

Who dares break a custom? Do any of you? And what of the common people, who pay for public funerals and the private ones, too? They have equal pride and spirit and proclaim that "Our dead must have as grand a funeral as any of our neighbors." So they hire all the hacks in town, buy a big, black, tawdry casket, with sham plate and handles and sham satin linings; they hire a \$2,000 hearse if they can find it, with fine black horses, black wooden plumes, black-robed funeral director, black driver, and bearers in heavy weeds and crape. Blackness everywhere, from heart to grave. And such a big funeral! Then often the little home is mortgaged for the first time to pay for all this sham and humiliation! And often the family go hungry and ragged for months or years to redeem a false pride at the pawnbroker's. Why all this foolish extravagance? Pride and fashion and custom are the honest answers.

Take your pencils and write, if you please, the real essentials of a funeral. They are not many. I mean the indispensable things. If you sift to the last elimination, you will have three things: A corpse, a grave or crematory, and help to handle the body. We buried great numbers of men as simply as that in the late war. I admit it was not satisfactory, nor Christian, but it was essential. And after the essentials, our creeds and customs add all the rest. Make the list at your leisure and reflect on it, and see what part of it all we could reasonably omit if our pride and vulgarity did not forbid!

Why should we have public funerals any more than public births? Custom! is the only answer. Because other folks do, and we dare not break a custom.

If wealth is vulgar and ostentatious, other people must emulate the rich in funeral matters, on account of the sacredness, we are told. Sacredness of what? Wealth and ostentation, or death? Think of a whole neighborhood waiting around for one to die, and then all flocking to the funeral for a free ride to the cemetery! Not all heartless, but many thoughtless and inconsiderate of the consequences, when some poor widow and children must needs go hungry to pay for it, and possibly lose their little home. When you see a poor, pale, pinched, hungry-looking woman on the streets, clad in weeds and leading a forlorn child, you are likely to think of Shakespeare's apt phrase in "Measure for Measure," that woman is "custom-shrunk;" and you exclaim with Hamlet, "Oh, reform it altogether!" "We mourn in black; why mourn we not in blood!" says Shakespeare, and it comes very near it sometimes.

Then think of all the dangers of public funerals! A crowd at a funeral is as pernicious as a crowd in the sick-room. It is intolerable to a sensitive and sincere mourner. It is an invasion of the sacred right of private grief, and subjects the mourners to dangerous drafts, to foully contaminated air and poisonous exuvia that is often contagious. The mourners, whose hearts are crushed with grief and whose nerves are unstrung and unrested, and whose digestion is paralyzed, are in no condition to withstand the assaults of miscellaneous disease germs distributed by the crowd. The adic poison emanating from the dead as well as the living, in close rooms, is especially dangerous to mourners who are depressed with grief and long watch-

ing and loss of sleep and rest. The crowd itself is often in grave danger. During the service many of them sit out of doors and uncovered, who would no more dare do it at home on the same day than they would dare jump in the river. Many people take their death colds right there. At the first funeral I ever attended I lost my dearest school mate in just that way. Where death does not result, people often contract colds, coughs, bronchitis, pneumonia, rheumatism, neuralgia, croup, grip, meningitis, catarrh and consumption in that way. The same danger menaces the multitude at the grave, in wet and cold weather.

When pall-bearers and mourners stand in the heat or cold by the open grave with their heads uncovered while the burial service is being read and the remains consigned to the earth, many serious and some fatal illnesses are contracted. No head should be uncovered at the cemetery, not even the minister's.

Again, there is often but a step from grief to insanity. Many a highly sensitive mourner has gone stark mad at a funeral, some to recover soon and some not at all. Grief is a frightfully depressing agency, and instead of our present custom of crape, and all black and sombre dress and draperies and raven trappings and veils torn from the robes of night, and black hearses and black horses and grooms, and funeral directors and all the other paraphernalia of woe, good sense would lay them all aside. All these things but serve to increase the weight of woe which is already "too heavy for mortals to bear."

Think how everybody at a funeral feels called upon to say something sad and doleful and to look as woebegone as possible, and think of the effect of having all that reflected upon those whose hearts are already crushed and crying for even one moment's relief. Then think of keeping up a large amount of this blackness and darkness for a whole year in the lives of those who groan and pray for relief, and what good has it all done? What avail is it to the dead, and what use to the living? Can any sane man give one sane reason for all this forced depression of spirits for so long a time, or for any time at all? A black bit of ribbon or a feather on a white bit of background on the hat or shoulder could easily say to the world, "I have been bereaved," if any one preferred to make an outward sign of grief. Think further of the almost insufferable tortures of the mourning veil worn by the female portion of the family. (Men could not be hired to wear them.) Heavy, thick-woven stuff, full of crocking dye stuffs and dust, giving lodgment to all foul emanations from each expiration and giving them back to the lungs at each inspiration. They smother and stifle the wearer, who needs all the oxygen and ozone God can give her, that she may bear even the semblance of health thereafter.

Again, why should there be a great procession of creeping conveyances to the grave? When the ceremonies at the house or church are over and the bereaved have taken final look and leave, why should not a committee of trusted friends take the casket away and consign it to its last resting place, without the aid or interference of the whole community, friends and strangers alike? Why should the family be taxed at just this crushing and unfortunate time when they have no opportunity for self-defense against unscrupulous and heartless dealers in mourning goods, caskets and carriages? In the hour when grief is so great it could not unseal its lips to barter for even a lot in Paradise, these too-oft-time wingless vultures take 500 to 1,000 per cent. profit, because they know you

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.**

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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.

The next meeting of Shawnee County Horticultural Society will be held at Oak Grange hall, a place famous for good meetings. The following is the program: "Raising Potatoes," Melvin T. Kelsey; "How Shall We Induce People to Plant More Fruit?" Bradford Miller; "Home Adornment," Mrs. K. J. McCracken; "Horticulture for Young People," Miss Allie Buckman. An invitation is extended to bring early berries and early vegetables.

An English statistical authority remarks: "Europe has rarely been worse prepared for a disturbance in the channels of her food supplies. The partial failure of the European wheat crop last summer, followed by a big jump in the price which induced farmers to market their produce rapidly, has left a void in the supplies for the concluding months of the season, which it may be difficult to fill even should peace be preserved, while in the event of any interference with the flow from the premier source of supply—North America—the position would become extremely grave."

The Kansas State Board of Health, by its Secretary, Dr. H. Z. Gill, has issued a report on typhoid fever and especially on the epidemic at Manhattan last fall. The entire report is full of interest, but the point of most importance to the general public is the confirmation given to the many previous observations that this much dreaded disease is generally contracted from the use of water containing germs of the disease—water which has been polluted in some way. A method of preventing the spread of the disease is to boil all water used for drinking or taken into the stomach in any way.

Indications are that the beginning of May will find the visible supply of wheat in this country reduced to less than 26,000,000—perhaps to 25,000,000—bushels. The period of lowest visible supply for the last three years has been about the beginning of September. Twice during the last ten years this period has been in July and three times in August. Last year the reduction of the visible from May to September was approximately 19,000,000 bushels. A like reduction this year will bring down the "visible" to 5,000,000 or 6,000,000, figures which have not been approximated during recent years. Any such depletion of supplies in public warehouses would be the signal for great advance in price.

Secretary of State John Sherman resigned his office last Monday. Assistant Secretary Day is in charge. He will doubtless be appointed to succeed Mr. Sherman. John Sherman has been in public service for almost two generations. He was prominent in some of the early investigations of Congress into the border troubles in Kansas in the fifties. He was Secretary of the Treasury for a long time during the period of readjustment of the country's finances succeeding the last war. For his part in this he has been more praised and more blamed than any other American. He now retires because the heavy work of the office weighed too heavily upon him. Whatever else may be said of him, it will scarcely be questioned that he has always acted with vigor and precision and has followed his convictions with fidelity.

THE WAR.

War with Spain is now a reality. By official declaration of Congress it began April 21. Our fleet is now blockading Cuba and is capturing all vessels carrying the Spanish flag in that vicinity. Several have been taken, some of which are of great value. The United States has not fired any shot to kill or to do damage so far. Spanish guns of Havana fired a few shots towards our fleet Saturday night, but without effect. The Spanish fleet at this writing (Tuesday) is at the Cape Verde islands, west of Africa. These islands belong to Portugal, which power as a neutral has ordered that the hostile vessels find other rendezvous. Spain has, so far, captured none of our vessels.

The plan of our operations seems to be to maintain the Cuban blockade, to land arms and supplies for the insurgents at undefended points on the coast, and to seize the Philippine islands. Our flying squadron is held in readiness at Hampton Roads to attack the Spanish fleet should it come this way and to punish any hostile demonstrations along the Atlantic coast. Should Spain fail to send her fleet the capitulation of the Spanish army in Cuba is a mere question of time and may, not improbably, be procured with little or no bloodshed.

The attitude of England and of Germany is that of neutrality with expressions of friendship for us. Russia appears to be strictly neutral, while France, Austria and Italy are neutral with preferences for Spain. There appears to be no doubt anywhere outside of Spain and Havana that at least eventually the United States will win.

FLOURS FROM MANY LANDS.

Discussing the qualities of different flours, an English writer speaks of Russian flour as being exceedingly variable, corresponding to the great variation in quality of Russian wheat. In summarizing this branch of the subject the writer says: "Low prices may tempt the bakers, but low quality and unreliability will eventually choke them off. Bakers will find it advantageous to give considerable more money for American flour than to chance using either Argentine or Russian, except for mixing purposes."

French flour is described as generally of "good color, very finely dressed, but weak, being not unlike the flour made from English wheat, soft and colory."

Indian flour is described as characterized by great dryness in all varieties. In some portions of India the wheat is beautifully white and makes a very white, useful flour, but lacks strength. The writer adds: "But, of course, it can in no sense be compared with the strong American wheat flour, although all of it is superior in this respect to any of the Pacific coast wheat flour, Californian, etc."

It is complained that Indian wheat is harvested in such a dirty condition—so badly mixed with peas that unless thoroughly cleaned the flour is likely to be affected. Even if well cleaned this flour is described as rather insipid.

Australian flour is credited with splendid color, fair strength and excellent flavor. It is not considered quite equal in strength to American flour and it is variable in its qualities, but in the English market Australian wheat, when obtainable, commands a higher price than any other white wheat except Oregon.

The demand of localities in England differs somewhat as to the qualities of flour. In all, however, the "strong" American flour appears to be the standard of comparison.

A strong flour, as bakers use the term, is one that takes much water in proportion to the flour used in making bread.

SUGAR BEET INVESTIGATION.

The chemical department of Kansas Agricultural College Experiment Station has just issued a valuable bulletin giving the results of experiments with sugar beets in this State. Prof. J. T. Willard, who writes the bulletin, has as a prominent characteristic the quality of candor, important in all walks of life and absolutely essential to the scientist. This bulletin differs from much recent beet sugar literature in that its author does not assume the role of an advocate. To be an impartial investigator may be more prosaic than to write of glittering possibilities based on some facts and some imagination, but the investigator who follows Prof. Willard's course renders the more valuable service.

The station received 200 pounds of sugar beet seed, last spring, from the United States Department of Agriculture. This seed was distributed to 393 farmers in Kansas. Samples for analysis were sent to Prof. Willard last fall by 156 of the 393 persons.

The report of these analyses is inter-

esting. In many cases the beets show a fair percentage of sugar. The beets rich in sugar came from various parts of the State, there being no advantage of the northern over the southern sections, as has been expected by some.

Since the experiments made at Medicine Lodge, nine years ago, resulting in the production of high-grade sugar beets, the Kansas Farmer has not doubted the possibilities of Kansas in the matter of growing the sugar in the beets. The establishment of a successful beet sugar industry requires more than this. But Kansas has cheap fuel, plenty of water and plenty of limestone—three essentials in beet sugar manufacturing.

Possibly it may be demonstrated that Kansas can produce beet sugar to as good advantage as any State in the Union. Possibly the sugar tariff may be kept high enough to make the price of sugar so high as to leave a profit on its manufacture in the United States.

But those who contemplate investing time or money in developing a sugar industry will find, on investigation, that there is but one primary customer for sugar in this country, and that is the sugar trust. This trust buys at its own price and does not permit dealers to handle sugar which has not passed through its hands.

It is well that the investigation of the problems of sugar beet production continue. Possibly the future may witness an emancipation of the sugar industry from the incubus of the sugar trust. In that case a tariff sufficiently high to equalize the cost of production here with the low cost of production in Cuba may enable the United States as now constituted to produce the sugar used by the people of this nation. It is not impossible, however, that the destruction of the power of the trust may necessitate the destruction of tariff protection also. Should Cuba, after firmly establishing her independence, seek and obtain admission as a Territory or a State of our Union, she will be able to produce our sugar at figures which will make beet sugar manufacture in this country an absurdity.

Protection of Crops from Frost.

The danger of damage by frost is an ever-present one during the spring to the truck farmer especially, to the orchardist, and to a less extent to the general farmer. In a bulletin just issued the Purdue University Experiment Station makes an excellent exposition of the most practical remedial measures. It says:

"Water is the best protection from frost. The air always contains some water vapor, and the warmer the air is the more water vapor it can contain. At 50° a cubic foot of air might contain four grains of water vapor, and usually contains about three grains. When the air cools, a point may be reached at which it cannot hold up all the water which it contains. If this is above the freezing point, some of the water vapor is deposited in the form of dew. But when the water changes from water vapor to liquid dew a large amount of heat is given off and this prevents a further fall of temperature. But if the air contains so little water vapor that it can cool below the freezing point before the water begins to deposit, the water is deposited in the form of ice crystals and we have a frost. A moist air, then, is a protection from frost. The frequent shallow cultivation that saves soil moisture will at the same time keep the air above the soil more moist, and will to some extent serve as a protection from frost. Dr. Kedzie quotes a circumstance where a recently cultivated corn field was not injured by a frost that cut down the corn on surrounding fields.

"A more direct and effective way of protecting plants from frost is to irrigate the land or to sprinkle the plants with water at the time the frost is expected. In this State few farms have means of irrigating in the usual way. But there are many farms on which fruits are sprayed, and the spraying machinery may easily be used to sprinkle plants with water to protect them from frost. This method has proved practical and profitable on a variety of early spring crops.

"Another method is to form a cloud over the field which will protect it. This is usually accomplished by burning material at such points that the wind will blow the smoke across the field. The purpose is not to warm the air, but to interpose a layer of smoke between the plants and the sky, and so prevent the loss of heat. For this purpose smudge fires giving much smoke are best. Special torches made of muck and clay have been patented for this purpose. Those who have experimented in frost protec-

tion seem to think that the sprinkling method is the most practical and efficient. H. A. HUSTON, Chemist."

Publishers' Paragraphs.

A very useful book for users of farm engines is "The Traction Engine—Its Use and Abuse," by James H. Maggard. It is published by David McKay, Philadelphia. The price is \$1.

The Northwestern Harness and Carriage Co., of St. Paul, Minn., keep their trade. They will not furnish any harness unless it is the best of its kind, as they have a reputation to sustain for honorable treatment of patrons, and have unswervingly maintained it for years.

Silberman Bros., of Chicago, make the following report of values of Kansas and Nebraska wool at Chicago for April, 1898: Fine (heavy), 12@14c; fine (choice), 14@16c; fine medium, 14@16c; medium, 16@18c; low medium, 16@18c; coarse, 14@16c; cotted, etc., 10@12c; black, 12@14c. While the trade is somewhat disturbed in Eastern cities by the war situation, these experienced wool commission merchants assure their patrons that the urgency of the demand is such that those who reject low offers will be able to sell at better prices by shipping to Silberman Bros., who are prepared to make advances on consignments.

The Western Newspaper Syndicate is going to give every able-bodied farmer in Shawnee county a chance to secure a copy of the Revised Encyclopaedic Dictionary at the special club price, and will also furnish a year's subscription to the Kansas Farmer without additional cost. This is a book that every farmer's family should have for reference. It is not only an encyclopaedia but a dictionary, a complete library of biography, and an atlas and gazetteer of the world. The twelve volumes will be sold at a price that will be an object and on terms that every farmer can afford. We trust that representatives of the Western Newspaper Syndicate may have the co-operation of our readers.

The authorship of the much-discussed "Inner Experiences of a Cabinet Member's Wife," printed in the Ladies' Home Journal, will be revealed in the June issue of that magazine, when the name of Anna Farquhar will appear as the author. It is surmised that the domestic experiences described in these letters were those of Mrs. W. H. H. Miller, wife of the Attorney General in President Harrison's Cabinet—since Miss Farquhar is known to be a personal friend of the Miller family, and to have spent considerable time with them in Washington during their official residence there. The author of these letters was born and raised in Indianapolis, in neighborly relations with the Harrison and Miller families, but for ten years past she has lived a studious professional life in New York, London and Boston. She is now connected with the editorial staff of the Boston Transcript. In addition to her "Cabinet Member's Wife" letters she has published one novel—"A Singer's Heart"—and another one is about to be issued. She is a young woman, exceedingly clever, and only her closest friends have known her connection with the Washington letters which have attracted such wide attention.

The New York Ledger has a new attraction. Without changing its character as a story paper and family weekly, it has added large full-page illustrations of contemporary events and characters. A recent number had a fine portrait of General Nelson A. Miles on its first page, and the current number follows with an equally good portrait of Captain William T. Sampson. The next number will contain an excellent full-page portrait of Commodore Winfield Scott Schley. These men are likely to become national heroes, and our people are interested in having life-like representations of them for preservation. The large double-page pictures in the above numbers of the Ledger, of New York harbor and its fortifications, characteristic scenes in the city of Havana, the flying squadron, and picturesque Key West, are illustrations of great characteristic scenes in the city of Havana, the flying squadron, and picturesque Key West, are illustrations of great interest and beauty, showing important localities likely to be the theater of great events in the near future. This is a step worthy of this favorite weekly paper and its enterprising proprietors. The price of the Ledger, with its twenty pages of reading matter and illustrations, is 5 cents. It can be ordered of the local newsdealer or of the publishers, Robert Bonner's Sons, Ledger Building, New York.

The horse is dainty and mangers, troughs and feed should be clean, if you would keep the animal in condition.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending April 25, 1898, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

A cool week with an abundance of rain, except in the extreme western counties, and excessive rainfall in the central.

RESULTS.

EASTERN DIVISION.

Corn planting generally interfered with by wet weather; some corn up as far north as Woodson. Wheat is growing rapidly, with pastures improving and gardens showing up. Apples are leafing out and beginning to bloom in the central counties. Woods are turning green.

Allen county.—Trees all leaved out; apple trees in bloom; flax all in and a little corn; potatoes coming up; too wet last of week.

Atchison.—Vegetation is advancing; grass short; oats small; peach, pear and plum trees in full bloom; prospect for fruit of all kinds good.

Bourbon.—Fine corn-planting weather in western part, too wet in eastern; wheat looks fine.

Brown.—Fine growing weather; corn planting begun; peaches, plums and pears in bloom; early potatoes coming up.

Chase.—Work delayed by wet weather; peaches safe from ordinary frosts, and apple trees beginning to bloom; pastures improving and most stock turned out.

Chautauqua.—Corn mostly planted, the early planted is now up; grass growing rapidly; cattle turned out; apples blooming; all vegetation has made large growth.

Cherokee.—Fine growing week; corn planting and flax sowing well along; all kinds of seeds coming up well; straw-

much corn planted; orchards in full bloom; more flax being sown where oats killed out; pastures growing nicely.

Osage.—Corn planting nearly done; apples and cherries beginning to bloom; pastures in splendid condition; all crops making good start.

Riley.—Too wet for corn planting; grass and alfalfa growing finely; wheat and oats doing finely; gardens growing well; hill pastures wet deeper than in ten years.

Shawnee.—Too wet to work; wheat and grass growing finely; grape buds opening; apples beginning to blossom; some corn planted.

Wilson.—Rain has delayed planting; everything planted doing fine; woods and pastures getting green.

Woodson.—Much corn planted, the rest stopped by rain, some corn up; wheat fine; cherries in bloom.

Wyandotte.—Wheat growing rapidly; wet for corn planting; pears, peaches and apricots in full bloom; apple trees leafing out; blue grass pastures doing nicely.

MIDDLE DIVISION.

The excessive rains have stopped work, and the ground is being wet very deep, but very little going into ponds or streams for stock water. Wheat will now "hide a rabbit" in many southern counties and is in splendid condition in all parts. Corn planting is about done in the extreme south and just begun in the extreme north; is coming up south. Alfalfa is in fine condition and much is being sown. Fruits are giving good promise.

Anderson.—Farm work delayed by rains; everything promising except oats; wheat particularly fine.

Barber.—Fine week for all crops; wheat, rye and oats doing well; farm work retarded by rains; peaches, pears, cherries, gooseberries and currants in bloom; nearly all cattle on range and

\$500. FOR NAMES OF 12 SEEDS! OUR SEEDS throughout the country as seeds that grow and we want to know if the reader of this paper can tell the names of the twelve seeds shown below. We want to educate you in knowing SEEDS and therefore have made the following **GREAT OFFER**: These 12 illustrations were carefully engraved from selected seed, which represents 12 well known vegetable, flower and field seeds, and we offer

1. B 4. P 7. B 10. B
2. R 5. S 8. A 11. O
3. Z 6. P 9. C 12. S

\$500. IN CASH FOR THE 12 NAMES. First letter of each is given; name them like this: Corn, Beet, Bean, etc., and be sure to give the number of each. All except one are natural size. Every person giving 6 names of the seeds will receive a Four Dollar Prize by return mail. We want you interested in the Best Seeds that Grow and make this educating seed offer to know whether you know good seed when you see it. To enter the contest send 25 cents (silver or money order) and we will send you by return mail a 50c. certificate good for this amount of seed to be selected from our catalogue any time within 3 years, also full particulars. Club of 5, \$1.00. You can't lose a cent; if you don't know all 12 seeds you ought to know six, that gives you a \$4. prize, besides you are sure of the 50c. certificate. Don't miss this offer. Address, FAIRVIEW SEED FARMS, Box 67, Rose Hill, N. Y.

finely; spring grain doing fairly; trees leafing out.

Pratt.—Wheat looking excellent; large corn crop going in; oats and barley coming in finely; fruit looking better.

Reno.—Wheat in fine condition; oats a poor stand; listing corn in progress; cherries blooming; alfalfa being sown.

Republic.—Peaches in full bloom; prairie apples just blooming; wheat looks well; corn planting continues.

Rush.—Very favorable to growing crops; wheat damaged but little in March; oats look favorable.

Russell.—Wheat growing vigorously; corn planting well begun; peaches in full bloom; oats no good; pastures backward.

Saline.—Wheat greatly improved; corn planting well under way in the southern part; cherries in full bloom; alfalfa doing finely; pastures backward.

Sedgwick.—Wheat in excellent condition; corn mostly planted, some up, in western part listed furrows filled up by heavy rain; pastures starting well but backward; cherries and peaches in bloom.

Smith.—Favorable to all growing crops; corn planting being pushed; peaches blooming; grass growing well; much alfalfa being sown; ground in fine condition.

Stafford.—Very favorable for all growing crops; grass coming on fast.

Sumner.—Wheat never looked finer; oats improving; corn planting done; corn coming up; cherries and plums in bloom.

Washington.—Wheat in excellent condition; corn planting begun in south part; peaches mostly killed; apples all right.

WESTERN DIVISION.

Grass is advancing rapidly and stock is improving. Corn planting becoming general. Wheat generally in good shape, though Ness reports some spotted fields. Barley, oats and alfalfa are growing rapidly, with early fruits in bloom.

Clark.—Grass advancing; corn all in; wheat looking good; barley, rye and oats fair; fruit trees in blossom, leaves coming out; everything growing fine.

Finney.—Growing week; alfalfa making good growth; wheat, light acreage and backward; fruits in full bloom; range grass starting slowly; ground rather dry, but nothing suffering.

Ford.—Growing well; wheat fine; oats and barley good; alfalfa and range grass coming on first-class.

Graham.—Prospects very flattering. Grant.—Ground a little dry; not much farming done yet; stock wintered well; grass growing nicely.

Gray.—Hail injured wheat in north part; crops in south part doing well; alfalfa and range grass growing finely; busy plowing.

Greeley.—Soil in good condition; three days high winds, and three days with rain.

Hamilton.—Grass coming nicely; fruits promising, except apricots; wheat is small but growing fast; some corn and cane planted; stock doing well.

Haskell.—A fine week for all growing crops; wheat improved wonderfully.

Kearny.—Fruit trees in bloom; ground in good condition for planting; wheat and grass looking well.

Morton.—A growing week for grass and trees; plums full bloom; gardening started; some plowing.

Ness.—Wheat spotted, new and trashy ground showing best stand; range grass growing rapidly; corn planting well under way; stock improving; peaches in bloom.

Sheridan.—Fall wheat growing rapidly; spring grain never looked better; corn planting general.

Sherman.—Good general rains; conditions very favorable to growth of all crops; corn planting progressing rapidly.

Thomas.—Corn planting and listing in full progress; spring wheat, oats and barley growing well; wheat drilled in corn and on plowed ground will make nothing.

Trego.—Fine growing weather; wheat starting well; early barley backward; more corn than usual going in.

Wallace.—Range grass fine; wheat, oats and barley looking well; corn plant-

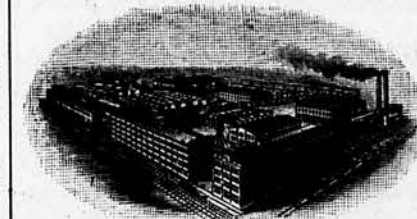
ing in progress; alfalfa looks fine, and much being sown; gooseberries and currants blooming.

The Kansas Farmer has made arrangements whereby it can furnish the Kansas Farmer one year and Prof. Henry's great book, "Feeds and Feeding" (657 large pages), for \$2.50. Prof. Henry's book sells for \$2. No feeder can afford to be without "Feeds and Feeding."

A terrific warfare has been waged against the Kansas Insurance Commissioner and he has been charged with oppressing some of the companies doing business in this State. He has insisted that, in order to maintain a license to do business with Kansans, an insurance company must pay its policies when due to rich or poor without discrimination; that its business methods and its resources must be known and satisfactory to the Kansas Insurance Department; that among other things, it must be known whether an undue proportion of the money of the insured is lavished upon salaries of officers. The Commissioner has been sued, and enjoined, and put through his legal paces at a lively rate on account of his interference with methods that he has thought questionable. It is a notable fact, however, that among all of the exactions of the Insurance Department in the interest of policy-holders, not one has touched the Kansas Mutual Life Insurance Company or any of its methods of doing business. This company has all along done business in accordance with the idea that insurance is purchased by policy-holders for the benefit of their families, and that legitimate profit, reasonable salaries and conservative expenses are right and proper, but that any extravagance is a wrongful waste of trust funds. It has paid its losses promptly and cheerfully, so that no Insurance Commissioner could find objection to any of its methods or business transactions; and, withal, it has kept its funds in such safe and profitable investments as to amply guarantee the ability of the company to meet its engagements.

A Great Carriage Concern.

The business methods of the Elkhart Carriage and Harness Manufacturing Company have built up an immense business during the last twenty-five years, requiring the large factories shown in the accompanying illustrations. The method of selling carriages, wagons and

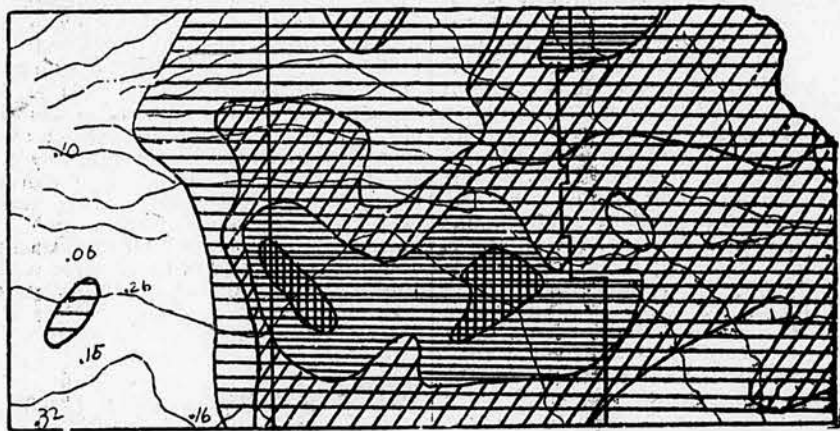


harnesses directly to the users at factory prices, saves a great deal of the cost of the article, and by doing a strictly cash or C. O. D. business the concern is not obliged to overcharge one customer to make up losses on another one. The liberal plan of the company includes shipment of goods anywhere for exami-



nation, and if they should be unsatisfactory in any way they are returned and the company pays the freight both ways. The illustrated catalogue which they send free is up-to-date, and the prices are remarkably low. The company has an enviable reputation for liberal dealing and reliability.

An all grain winter diet will ruin the health of swine. If your hogs are ailing from this cause, get them onto pasture as soon as possible.



Scale less in inches 1/4 1/2 3/4 1 1 1/2 2 2 1/2 3 3 1/2 4 4 1/2 5 5 1/2 6 6 1/2 7 7 1/2 8 8 1/2 9 9 1/2 10 10 1/2 11 11 1/2 12 12 1/2 13 13 1/2 14 14 1/2 15 15 1/2 16 16 1/2 17 17 1/2 18 18 1/2 19 19 1/2 20 20 1/2 21 21 1/2 22 22 1/2 23 23 1/2 24 24 1/2 25 25 1/2 26 26 1/2 27 27 1/2 28 28 1/2 29 29 1/2 30 30 1/2 31 31 1/2 32 32 1/2 33 33 1/2 34 34 1/2 35 35 1/2 36 36 1/2 37 37 1/2 38 38 1/2 39 39 1/2 40 40 1/2 41 41 1/2 42 42 1/2 43 43 1/2 44 44 1/2 45 45 1/2 46 46 1/2 47 47 1/2 48 48 1/2 49 49 1/2 50 50 1/2 51 51 1/2 52 52 1/2 53 53 1/2 54 54 1/2 55 55 1/2 56 56 1/2 57 57 1/2 58 58 1/2 59 59 1/2 60 60 1/2 61 61 1/2 62 62 1/2 63 63 1/2 64 64 1/2 65 65 1/2 66 66 1/2 67 67 1/2 68 68 1/2 69 69 1/2 70 70 1/2 71 71 1/2 72 72 1/2 73 73 1/2 74 74 1/2 75 75 1/2 76 76 1/2 77 77 1/2 78 78 1/2 79 79 1/2 80 80 1/2 81 81 1/2 82 82 1/2 83 83 1/2 84 84 1/2 85 85 1/2 86 86 1/2 87 87 1/2 88 88 1/2 89 89 1/2 90 90 1/2 91 91 1/2 92 92 1/2 93 93 1/2 94 94 1/2 95 95 1/2 96 96 1/2 97 97 1/2 98 98 1/2 99 99 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Horticulture.

INSECT ENEMIES.

From Bulletin No. 77, by Profs. E. E. Faville and Percival J. Parrott, of Kansas Agricultural College Experiment Station.

Plum Curculio.

(*Conotrachelus nenuphar* Herbst.)

Much damage has been done to the plum industry in Kansas by the plum curculio. There is scarcely a plum orchard that has not received more or less injury. The insect, becoming, as it has, widespread throughout the State, is undoubtedly the worst enemy of the plum-grower. The adult (Fig. 16) is a small beetle three-sixteenths of an inch in length. Its upper surface is rough with black, shining elevations; on the middle of each wing is a black hump. The general color is a dark brown with spots of ashy gray and ochre yellow. Although the plum suffers most from its attacks, the peach, prune, cherry and apricot often receive severe attacks. The beetle passes the winter in the ground, under loose bark and similar places of shelter. When spring opens and the plum trees are in blossom, the adults commence to fly, and when the fruit is set to deposit their eggs. By means of her snout the female perforates the skin of the fruit, making a hole from one-sixteenth to one-tenth of an inch deep, scooped out at the bottom. In this cavity she deposits an egg and pushes it to the bottom with her snout, afterwards cutting a crescent-shaped slit in front of the aperture (Fig. 16). The number of eggs deposited by each female is from fifty to 100. The egg is of a white color, oval

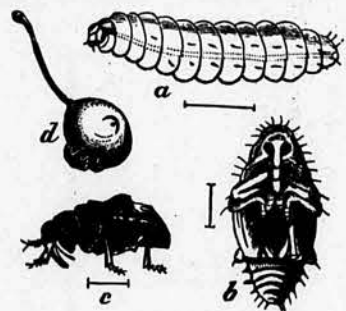


FIG. 16. a. Larva. b. Pupa. c. Adult. d. Plum, showing puncture and crescent.

and oblong, about three times as long as wide. As soon as the egg is hatched, which takes about a week, the larva begins at once to eat its way to the center of the fruit, where it feeds upon the pulp surrounding the stone or pit. It takes from three to five weeks for the larva to reach the point of maturity, at which time it is about two-fifths of an inch in length, and with the exception of its light brown head, is of a yellowish white color. In most cases badly-infested fruit does not mature, but falls. When the larva has reached its full growth it passes into the ground for several inches, where it transforms into the pupal stage. It remains in this stage from three to four weeks, occasionally stopping until spring, when it emerges as an adult beetle.

REMEDIES.

Various opinions are entertained as to best methods to be pursued in combating the attacks of the beetle. Spraying with arsenites is strongly advocated by some, while others claim the operation is attended with poor results. The beetles necessarily feed some before the eggs are deposited and during the period of depositing. Applications should be made to destroy the insects before the operation of oviposition is performed. The first treatment is best made when the leaves are just unfolding; a second, after the blossoms have fallen, followed by a third if the attacks are severe, using Paris green at the rate of one pound to 200 gallons of water and one pound of lime. Spraying is more universally practiced at the present time than other methods. The writer has met with good results from this operation. Many adhere to the more certain method, that of jarring early in the morning while the beetles are inactive. The insects peculiarly fold up their legs beneath their bodies and fall when jarred, being caught in sheets spread on the ground. When trees are badly infested they should be jarred every morning. A mechanical contrivance is often used, constructed of heavy cloth in the form of an inverted umbrella, open at one side to admit the tree trunk. The contrivance is placed on a wheelbarrow which is supplied with

a padded punch to strike the tree. This method is quite rapid and has proved quite efficacious in many cases.

The Plum Gouger.

(*Coccotorus scutellaris*, Lec.)

The gouger resembles the plum curculio in many respects. Injuries received by it are often attributed to the latter. Its depredations are confined chiefly to regions of the Mississippi valley and it is found in a few sections of this State. It resembles the plum curculio in many respects, being a snout beetle and appearing about the same time. The beetle (Fig. 17) is a little more than a quarter of an inch in length, of a brown color with a yellowish tinge and lacks the humps which are present on the curculio. The winter is passed in the adult



FIG. 17. Plum Gouger.

stage in some crevice or protected spot, appearing in the spring just before the fruit blossoms fall. When fruit is forming the beetle deposits its egg in the same manner as the plum curculio, excepting that no crescent mark is made about the point of insertion. Upon hatching, the larva burrows toward the stone or pit which it easily perforates, owing to its comparative softness, and maintains its existence by feeding upon the contents of the interior. The larvae are whitish in color with large heads. Just before entering the pupal stage, the larva cuts out a circular hole in the natural shell through which the beetle may make its escape, usually at the close of the fruiting season, having passed the pupal stage within the plum. There is only one brood a year and it requires a much longer time to complete its transformations than does the curculio.

REMEDIES.

The plum gouger is combated in the same manner as the plum curculio, using the same treatment.

Peach Tree Borer.

(*Sannina exitiosa* Say.)

One of the most widely distributed insects attacking peach orchards in this climate is the "peach borer." Notwithstanding the havoc noted each year, scarcely anything of its attacks, life history or appearance is known by the majority of horticulturists of this State. Too often peach trees planted and left to grow suddenly weaken and die, seemingly from some unknown cause. Thus the planting of peach trees is little encouraged on the average farm. If the method of destruction of the borer were better understood, its attacks could be more easily stopped. The damage done to the trees consists in extreme cases in

about one-fiftieth of an inch in length. The earliest record of the appearance of the adult at the station is June 16. From about this time until fall, eggs are deposited on the bark at the base of the tree, fastened by a gummy substance which is secreted by the female. As soon as the larvae hatch, they work their way downward toward the roots. They do not perforate the bark at first, but as they increase in size they gradually enlarge their channels laterally and inwardly. When first hatched the larvae are very small, but by winter some individuals attain a length of one and one-third inches (See Fig. 18). They are of a whitish color, slightly tinged with yellow, body soft and cylindrical, slightly tapering from first three segments, head horny-like, brown with strong jaws, segment next to head semichitinous. Fine hairs are arranged sparsely over the body, more noticeable at tip of abdomen. In studying badly infested trees at and near the college grounds during the past season, a number of important and practical observations were made. Whole trees with roots attached were removed in certain instances and studied (See Figs. 18 and 19). Upon examination of the infested trees various stages of the larvae were found, varying in length from one-fourth of an inch to one and one-fourth inches. This variation in larvae may be found particularly in fall and spring—this fact often leads to the belief that the life history consumes more than one year; although there may seem to be several broods, there is but one year employed in completing the life cycle. This difference in size is easily accounted for by the fact that eggs are deposited from about the middle of June to September. By a study of the workings of the pest, the large larvae appear to form long channels or broad, deep cavities filled with large quantities of gum and worm castings. A number of channels measured showed a measurement of one and one-fourth inches wide by two and one-eighth inches long. The larger larvae are found beneath the bark, feeding on the cambium and interior portion of the bark. Seven inches below the ground large larvae were detected which had eaten one-fifth around roots having circumference of eight inches. Several small roots next to it were dead, undoubtedly due to action of the borer. A number of trees and roots were beginning to decay, showing serious effects of the insect (Fig. 18). In a number of instances the work of the larvae upon the roots seems more destructive than upon the trunk. They not only cut the bark and cambium but burrow grooves into the woody tissue. The larvae pass the winter in different positions, as observed by careful examinations during the winter months. In a badly infested tree the liber of the bark was perforated with short channels, evidently the work of small larvae.

Larvae were found feeding upon rotten wood, four or five inches from growing tissue, though evidently not there by accident. These larvae were in large

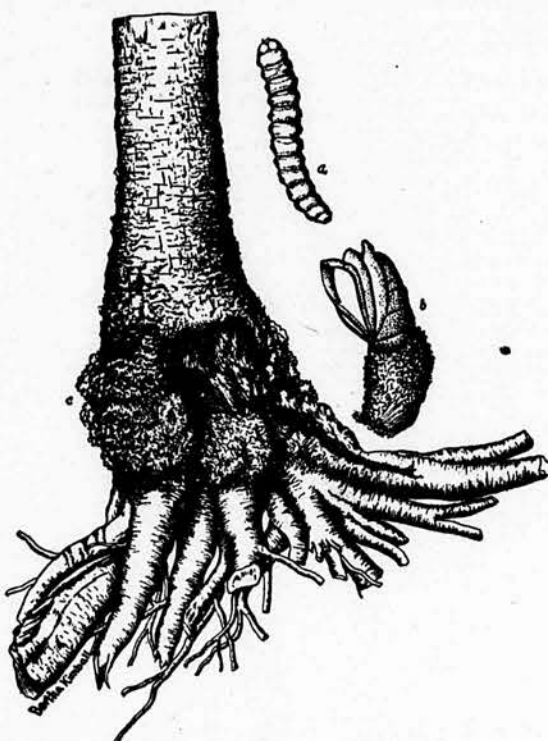


FIG. 18. a. Larva. b. Pupa from which adult has emerged. c. Exudation of gum. d. Work of larvae on root.

the entire girdling of the tree. In slight attacks mere excavations are made in the bark and layers of the bark. Where girdling is prolonged, the infested part begins in time to decay. The eggs are deposited on the bark of the tree, ordinarily near the surface of the ground. The eggs are of a yellowish color, oval shaped, somewhat flattened, and average

channels about one-fourth of an inch deep. The number of larvae is dependent upon the care that is exercised in the protection of the tree. In one orchard inspected, trees were detected containing over fifty larvae. The number in other trees varied, depending upon the severity of the attack. About the middle of June the larvae have nearly

all attained full size. They then spit for themselves follicles of silk with gum and excrement intermixed. The pupae (see Fig. 18) are about an inch in length, brown in color, ovate with obtusely rounded ends. They are attached to the trunk of the tree at the base just above the ground. The pupal state lasts about a month. There is a great difference in the sexes of the adults (see Fig. 20), the

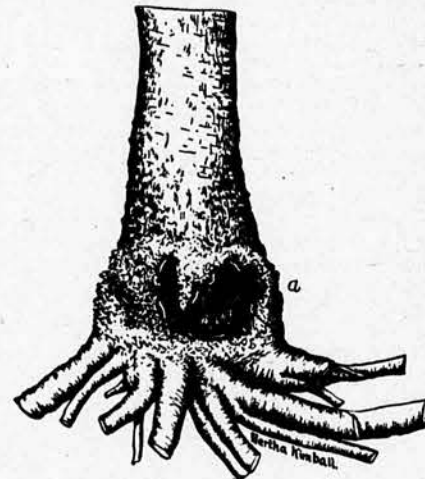


FIG. 19. a. Larva exposed.

female being much larger and more robust than the male, from which she is easily distinguished by a broad, transverse, orange-yellow band on abdomen. Both have almost transparent wings and are of a steel-blue color.

REMEDIES.

As the presence of the larvae is clearly indicated by the exudation of gum, one of the first remedies to suggest itself is to search for the larvae and remove them. The depth to which the larvae channel and the manner of their work makes the operation almost speculative, so that there is great danger of serious injury to the trees in digging for the insect, making the method almost impracticable. The best method that can be employed in combating this insect is by preventing the adult from depositing its eggs. Mounding the tree is often employed to meet this end; hilling the trees to the height of about a foot in April before the adults emerge, thus preventing them from depositing their eggs. This mound should be left on until fall; the object, as in all mechanical protections, being so to protect the trunk

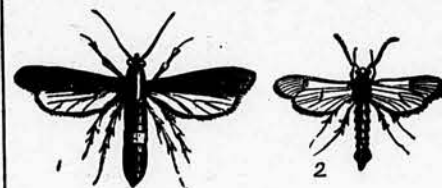


FIG. 20. Adults.

that the adult cannot deposit its eggs nor the larvae emerge. Bands of tarred paper may be used by wrapping to a height of two feet, tying at top. These should be renewed each year. Fine wire netting, which is more lasting, may be employed. It should extend two or three inches below the surface of the ground. Applications of certain washes are made during the spring and summer months which are obnoxious to the moths and keep them from depositing their eggs. One of the most common used is an alkaline wash, consisting of soft soap and washing soda made to the consistency of paint, to which enough crude carbolic acid is added to give the mixture a strong odor. Apply the wash with a stiff brush at various times during the season.

Beauty Is Blood Deep.

Clean blood means a clean skin. No beauty without it. Cascarets, Candy Cathartic clean your blood and keep it clean, by stirring up the lazy liver and driving all impurities from the body. Begin to-day to banish pimples, boils, blotches, blackheads, and that sickly bilious complexion by taking Cascarets,—beauty for ten cents. All druggists, satisfaction guaranteed, 10c, 25c, 50c.

ARTICHOKES

No. 1 for all Stock, Prevent Hog Cholera. Before you buy send for ESSAY on kinds planting harvest, and yield (often 1000 b.p.a.) with prices and freight rates to all points FREE. Sin. bu. J. F. VIGGERS, Box 55, ALTON, Ill.

PEACH TREES

4 to 6 ft. at 2c.; 3 to 4 ft. at 15c.; all 1 year from bud, healthy and thrifty, no scale. Official certificate accompanies each shipment. Sample by express if wanted. Can ship any time. Trees kept dormant till May 10. R. S. JOHNSTON, Box 17, Stockley, Delaware.

INSECTS

Will not touch trees treated with VITA-NOVA. One dollar's worth treats twenty-five trees; lasts four years. J. WILLIAMS BROS., Danville, Pa.

In the Dairy.

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

OMAHA BUTTER EXHIBIT RULES.

Official rules for butter exhibits at the Trans-Mississippi Exposition in Omaha this year have been published. The scoring is to be done on the same basis as has been the rule in Chicago for some time and which was adopted several months ago by the New York Mercantile Exchange, giving 45 out of 100 points to flavor. From the printed copy of rules governing the exhibits the following is taken:

Dairy butter is understood to be butter from a single herd of cows made on the farm, or at the home of the owner, and the entry shall consist of one ten-pound tub; no other size accepted.

Creamery butter is understood to be butter made in a regular creamery or factory from the milk or cream of not less than ten herds of cows, from a churning of not less than 100 pounds, and the entry shall consist of one thirty-pound tub; no other size accepted.

There shall be four separate and distinct exhibits and entries of butter, one each in the month of June, July, September and October, on such day of the month as shall be determined by the superintendent of this department.

It shall be the duty of the superintendent to notify, by registered letter, each exhibitor at least ten days in advance of the date when such exhibits are to be judged, and each exhibitor shall within sixty hours after said notice is received forward his exhibit either by express or refrigerator freight, all charges prepaid.

Not less than ten days from the date of mailing of the notices herein required, the exhibits of butter shall be judged; said judging to be from a commercial standpoint by recognized experts and according to the following scale or score:

Flavor	45
Grain or body	25
Color	15
Salt	10
Style of package and packing	5

Total or perfection 100

No exhibit scoring less than 90 points shall be entitled to any portion of the cash premium offered.

As soon as the judging is completed all exhibits, unless otherwise disposed of by the owner, will be sold to the best advantage by the superintendent and the proceeds remitted to the owner, and accompanying said remittance shall be a copy of the score of said exhibit, signed by said superintendent.

In the awarding of cash premiums an entry made in any month by an exhibitor shall be entitled to its proportionate share of said premium, provided that no exhibitor shall be allowed to make more than one entry in each month, except that companies operating more than one separate and distinct creamery or factory may make entries from each of said creameries or factories.

All pro rata premiums will be divided among the entries in the lot scoring above the stated minimum (90 points) in proportion to the points scored above said minimum.

Each exhibitor whose exhibit scores above 95 points shall be entitled to a medal of excellence of exhibit, and accompanying said medal shall be a diploma specifying the score or degree of perfection of said exhibit; provided, that no exhibitor shall be entitled to more than one such medal and diploma and that to be given for the exhibit of greatest merit.

CREAMERY BUTTER.

One thirty-pound tub from churning of not less than 100 pounds, pro rata, \$500.

To entry making highest score, additional \$50.

(Provided, in case of tie on highest score the additional amount offered shall be equally divided.)

DAIRY BUTTER.

One ten-pound tub, pro rata, \$250.

To entry making highest score, additional \$50.

(Provided, in case of tie the additional amount shall be equally divided.)

Persons desiring to exhibit and compete for any of these premiums shall file their entries with the superintendent thirty days in advance of the date in each month in which exhibits are to be made.

The study of the question of feed is introductory to the study of the whole science of dairying, and the farmers of a creamery district invariably improve in their methods. When the product is

sold each day farmers become more solicitous about keeping their cows up to a high and uniform production, as the pocket feels it at once when they fall back. A spirit of inquiry as to ways and means is provoked.

Death of J. L. Hoffman.

We are pained to learn of the sudden death of Jonas L. Hoffman, at Newton, secretary and treasurer of the Hesston Creamery Company. Mr. Hoffman had been in ill health for at least six months. The management of the creamery, with which he has been identified for several years, rested largely upon his shoulders, and being an indefatigable worker he broke down under the strain of last season's heavy business. Early in the fall, under the advice of a physician, he went East for rest, and spent three or four weeks in a quiet little village in Lancaster county, Pennsylvania, where his parents still reside. When he returned to Kansas he seemed to have improved in health, but his head troubled him considerably. On Tuesday, April 5, he was taken with brain fever, from which he died on the following Friday night. The funeral was at his late residence at Newton, on the 12th inst.

Mr. Hoffman did much of recent years to develop the dairy industry in Kansas. For two years he was Secretary of the Kansas State Dairy Association, and it was through his untiring efforts that the convention of November, 1896, at Abilene, was so successful. At that time he was chosen President of the State Association, and he held that office until failing health compelled him to relinquish the position. Recognizing the fundamental principles that underlie a successful development of the dairy business, he spent much time in advising and instructing farmers in the proper care of their cows and the handling of the milk. His genial pleasant manner won for him a host of friends who will feel keenly the sadness of his death while only a little past 43 years of age. One of Mr. Hoffman's most intimate friends remarked: "He was one of the few of whom it could be said, this man was honest to a fault; in his business transactions his integrity brought him success, and his plain, open, untarnished character will bear imitation."

Dairy Notes.

The last quart of milk given by a cow is much richer in fats than the first one; and not to strip a cow clean is to doubly lose, for the neglect dries the cow, and here a large loss is soon manifested.

One virtue of the creamery has been that it has drawn the attention of the farmer to the good or bad quality of his cows. It has taught a discrimination in the capabilities of cows for supplying in quality and quantity milk which best pays for their keep.

The average income from dairy cows in localities where the milk is sold to condensing factories is said to be about \$38 a year. It sometimes runs as high as \$75 to a cow, and sometimes as low as \$25, but the general average is estimated to be about \$38.

The man who has the milking of the cow the first year determines her value as a milker ever afterward. It needs thorough, careful men to develop heifers into good cows for market, and such men are scarce. Such a calling is likely to be for a long time a profitable one.

The heifer with her first calf is but half a cow, and few are ready to buy her; yet if she is of good blood and well cared for she will grow in value faster than any other stock on the farm. Even her objectionable small teats will become developed with careful handling.

It ought not to be in any neighborhood that when a good milch cow is

A Leap in the Dark



is always dangerous and to be avoided. The farmer or dairyman who buys an inferior separator takes a leap in the dark. Avoid all danger and possibility of error by buying a SHARPLES SEPARATOR. It for a few cows buy the SAFETY HAND SEPARATOR. If for more than a few cows buy the LITTLE GIANT

SEPARATOR. In either event you get the best that your money will buy. They are made to save all the butter fat.

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

"ALPHA-DE LAVAL" CREAM SEPARATORS.



De Laval Alpha "Baby" Cream Separators were first and have ever been kept best and cheapest. They are guaranteed superior to all imitations and infringements. Endorsed by all authorities. More than 125,000 in use. Sales ten to one of all others combined. All styles and sizes—\$50. to \$225.—Save \$5. to \$10. per cow per year over any setting system, and \$3. to \$5. per cow per year over any imitating separator. New and improved machines for 1898. Send for new Catalogue containing a fund of up-to-date dairy information.

THE DE LAVAL SEPARATOR CO.
RANDOLPH & CANAL STS., CHICAGO. 74 CORTLANDT STREET, NEW YORK.

"AMERICAN" CREAM SEPARATOR



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FIRST PREMIUM

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BEST

Farm Cream Separator

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FOR SALE BY

S. F. WICKER,

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KANSAS

wanted it is necessary to go out on a still hunt and investigate a dozen before one is found suitable. He who sets about intelligently breeding a high graded lot of milkers for the trade will build wisely.

Because it is merely an adjunct to the general farm work there is but a small degree of methodical exactness in the management of the dairy. All the processes, from care and feeding to the handling of the milk and making the butter, are conducted on the hit or miss plan; it follows that there is a miss in the gilt-edged product.

Educate Your Bowels With Cascarets.
Candy Cathartic, cure constipation forever.
10c, 25c. If C. C. C. fail, druggists refund money.

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.

Give your Sheep a Gymnasium Save Yourself Unnecessary Work Stop the Leak in Your Pocketbook BY USING AN IMPROVED UNITED STATES SEPARATOR AND FIRST PRIZE DOG OR SHEEP POWER I Stopped the Leak.

MORGANTOWN, PA., Jan. 31, 1898.
The Improved U. S. Separator and First Prize Dog Power that I bought of you are doing good work, and run quiet and easy. The sheep learned quickly, and now as soon as the door is opened, will go and get on the power. As soon as the milking is done, the skimming is done.



I used to send my milk to the Creamery. Since I have had the U. S. I am making 1 lb. of butter more from every 100 lbs. of milk than I was paid for at the Creamery, and am getting 1 cent to 2 cents per lb. more for the butter than the top market price; so you see there was a small daily leak in my pocket, and in one month it was a pretty big one. S. H. MAST.

Sheep Gained in Flesh.

CONWAY, MASS., April 30, 1897.
The No. 5 Improved U. S. Separator is doing all that we can ask of it, and we are very much pleased with it. It tests on an average .03 of 1 per cent, which we think is close enough for any separator to skim.

It was reported when we first began to run it, that the sheep had to work too hard and would not stand it long, but he is not quite dead yet. After running it one month, he had gained 5 lbs. He now weighs 175 lbs. and runs it easily. J. C. NEWHALL & SON.

Send for circulars, containing hundreds of testimonials, telling of the gratifying results from using the Improved U. S. Separator.
VERMONT FARM MACHINE CO., Bellows Falls, Vt.

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FENCE TOOLS
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TOPEKA FOUNDRY,
TOPEKA, KAS.

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.

INDIGESTION.—I have a two-year-old heifer that has given milk about six weeks; has had corn fodder mostly all winter, with plenty of salt and water at all times; has wanted lots of water all winter; has had a good appetite, but is poor. During the night she belches up nearly all her food, I should think, from the piles that lay around on the ground. What is the trouble and what can I do for her? H. T. G. Lincoln, Kas.

Answer.—This heifer has indigestion; the condition has become chronic, and it will require careful treatment for some time before she can regain perfect health. Give her short rations of pure, wholesome food; clover or alfalfa instead of corn fodder, if possible. Give her a drench composed of muriatic acid, 1 ounce; dilute alcohol, 3 ounces; water, 1 quart; or, add the muriatic acid and the alcohol to her drinking water. Repeat the dose morning and evening and keep it up until decided improvement has set in.

EPIZOOTIC DIARRHEA OR SCOURS.—On March 1 I brought a car-load of

Horse Owners! Use



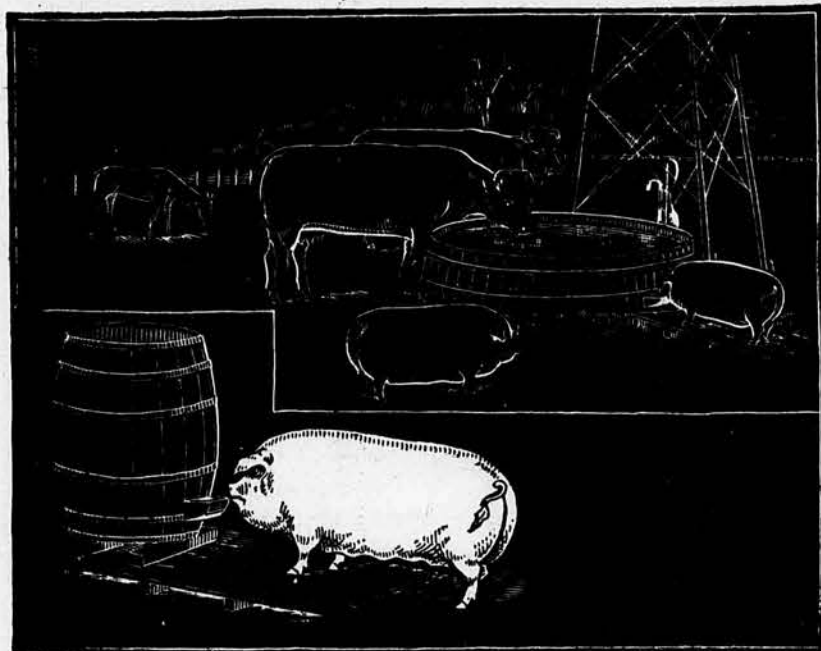
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The safest, best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted 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.

ing and it bled freely. Droppings I have found are rather dry, hard and lumpy; urine rather red. H. T. G. Lincoln, Kas.

Answer.—If your heifer still shows symptoms of disease, which is doubtful, give her a drench of one-half pound of Glauber salts in a quart of luke-warm water. If she shows symptoms of brain disorder bathe her head with cool water. Feed heifer some hay in addition to the green rye. Please answer the following questions: (1) Did heifer get any other green food besides rye, e. g., buckwheat? (2) Was the day on which the animal became sick a sunshiny, warm day? (3) Of what breed was the animal? Describe markings.

INTESTINAL WORMS.—Please tell the cause of cough with my hogs; also what makes one have spasms. At two different times after swilling one gilt, after filling up well, would lay down



LAKE CITY AUTOMATIC HOG WATERER.
Made by Stock Fountain Co., Lake City, Iowa. (See advertisement.)

cows and heifers here from Brown county; ten days later a car of mixed steers and heifers from Kansas City. My heifers have been coming in. They are hearty and seem to do well, but the calves are weak, live from three to five days and die. Some of them have the scours. We have given prepared chalk and such remedies as are usually given. We have lost several from each shipment. Before dying two of them have passed a little blood and seem to be in distress. We feed millet once a day, generally twice, and some corn. When ground is dry let them in corn stalks two or three hours per day and let them run in a large pasture where there is a large amount of old grass. None of the heifers seem to be ailing. All milk well. Are high-grade Durhams. We thought the loss in calves might be from some weakness in the bull, but as the same thing is occurring from both lots, that would hardly account for the loss. J. M. Blue Rapids, Kas.

Answer.—See veterinary column of Kansas Farmer of February 17, 1898.

AILING HEIFER.—Have a yearling heifer in good flesh—not fat. Has had corn fodder for roughness all winter, with plenty of salt and water at pleasure. Has been on rye pasture half a day at a time for about three weeks. Seems to have been perfectly well till last Monday, April 12, when she came in from rye bleating and shaking her head uneasily. I examined and found around one eye and under one side of jaw parts were swelled a little. This morning both ears and nose and jowls were swelled with the appearance of blood just oozing out from inside of both ears and end of nose. I cut a slit in end of one ear this morn-

and squeal loud, tremble all over, and in a few minutes raise partly up, leaning against fence, falling on left side, then raise up and walk off apparently well. In two or three days she had another such spell. In the first spasm two quite large worms passed in the manure; in the second she had a very large passage, but it looked all right. She eats good and looks fairly well. The cough seemed to be dry and hoarse, as though the lungs were affected. I gave turpentine to some and it seemed to help them. One fine sow coughed until she slunk her pigs some three weeks ago and has never come in heat since. They are all over it now and look well, but I quit putting ground rock salt in the barrel of swill that I gave once a day. I have always given a small amount of salt but have never given rock salt before. Could this have been the cause? Is not rock salt about the same nature of all common stock salt, or is it detrimental to hogs? A. C. R.

Answer.—The symptoms you mention, including the cough, are those of intestinal worms. Give each hog from one to four drachms of powdered areca nut in its feed, varying the dose according to the size of the animal. Then change the diet of the animals. Give some nitrogenous diet like oats, peas, beans, linseed meal, alfalfa, etc.; sour milk would be excellent at this time. Rock salt is practically the same and often identical with common stock salt. Any kind of salt, especially brine from salted meat, if given in large quantity to pigs will often produce very serious intestinal inflammations that may lead to death.

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New 1898 Model Ladies' and Gent's Bicycles are now being sold on easy conditions as low as \$5.00; others outright at \$13.95, and high-grade at \$19.95 and \$22.50, to be paid for after received. If you will cut this notice out and send to Sears, Roebuck & Co., Chicago, they will send you their 1898 Bicycle Catalogue and full particulars.

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For the round trip on certificate plan to Cleveland, Ohio, and return will be made by the Nickel Plate road, account of meeting of Supreme Council of the Royal Arcanum, May 18-25, 1898. Three through trains daily with service equal to that of any other line between same points. You will save time and money by patronizing the Nickel Plate road. Try it and be convinced of the advantages afforded the traveling public. J. Y. Calahan, general agent, 111 Adams St., Chicago, will be pleased to furnish any information relative to rates, etc. Trains depart from the Van Buren street passenger station, Chicago, Ill.

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did it. Sample gallon sent, freight paid, on receipt of \$1.50. Agents wanted.
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For ten rennets, with complete instruction for making and curing cheese at home with such simple apparatus as most farmers now have. Full cream factory cheese the kind made, and your money refunded if you fail.

THE STRAY LIST.

FOR WEEK ENDING APRIL 14, 1898.

Ottawa County—W. W. Truitt, Clerk.
TWO CALVES—Taken up by Chas. Thomas, in Ottawa tp., November 17, 1897, two bull calves, one about 1 year old, the other about seven months old; one light brindle, the other dark brindle, with dewlap marks.

Labette County—E. H. Hughes, Clerk.
COW—Taken up by J. G. Good, in Howard tp. (P. O. Coffeyville), February 18, 1898, one white cow, weight 1,000 pounds, dim brand on left side; valued at \$25.

Cherokee County—S. W. Swinney, Clerk.
MARE—Taken up by L. C. Wellman, three miles north of Baxter Springs, in Spring Valley tp., March 19, 1898, one bay mare, weight 850 pounds, small star in forehead, dark mane and tail, inde scribable brand on left shoulder; valued at \$15.
HORSE—Taken up by N. Nice, one-half mile north and one and one-half miles east of Neutral, March 21, 1898, one gray horse, weight 850 pounds, dark mane and tail, shod on hind feet; valued at \$20.

FOR WEEK ENDING APRIL 21, 1898.

Coffey County—Dan K. Swearingen, Clerk.
FILLY—Taken up by John Williby, in Pleasant tp. (P. O. Burlington), one bright bay filly with black mane and tail, 2 years old, weight 750 or 800 pounds, no marks or brands; valued at \$15.
MULE—By same, one very dark brown horse mule, mane and tail long, weight about 700 pounds, 2 year old, no marks or brands; valued at \$15.

Sheridan County—H. W. Percival, Clerk.
HORSE—Taken up by J. H. Small, in Adell tp., March 25, 1898, one bay horse, blind in right eye; valued at \$20.
HORSE—By same, one sorrel horse, white hind legs; valued at \$15.

Labette County—E. H. Hughes, Clerk.
MULE—Taken up by T. J. Vance, in Elm Grove tp. (P. O. Edna), April 2, 1898, one iron gray horse mule, 6 years old, 14 hands high, collar marks, no brands; valued at \$25.
MARE—By same, one brown mare, 6 years old, 14½ hands high, left hind foot white, no brands; valued at \$10.
HORSE—By same, one bay horse, 7 years old, left hind foot white, saddle marks; valued at \$8.

FOR WEEK ENDING APRIL 28, 1898.

Cherokee County—S. W. Swinney, Clerk.
MARE—Taken up by C. J. Stephens, in Lowell tp., April 6, 1898, one bay mare, 15 hands high, with letter "P" on right hip, weight 850 pounds; valued at \$30.

Ness County—J. S. Wagner, Clerk.
MARE—Taken up by E. Dawley, in Highpoint tp. (P. O. Ness City), March 24, 1898, one black mare, 5 years old, left hind foot white; valued at \$15.
MARE—By same, one brown mare, 5 years old, left hind foot white; valued at \$15.

STEEL PICKET LAWN FENCE,
Field and Hog Fence with or without bottom cable barbed. M. M. S. Poultry Fencing. Lawn and Farm Steel Gates and Posts.
UNION FENCE CO. DeKalb, Ill.

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direct to the farmer & paying freight thereon. We not only save him all of the middle man's profit but we have beaten the hand fence machine to death. Prices way down. It is a cheaper and better fence than can be made by any hand machine for the money. It's all interwoven; no loose ends to unravel; cross wires can not slip. **REMEMBER IT'S SOLD ONLY DIRECT TO THE FARMER** special discount. Better write at once.
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Here is a combine that makes for the farmer's best interests instead of against him. For the clear, easy, rapid gathering and stacking of hay there are no tools superior to these.
Strong, Durable and Long Lived...
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Acme Harvester Company, Pekin, Illinois.

MARKET REPORTS.

Kansas City Live Stock.
KANSAS CITY, April 25.—Cattle—Receipts since Saturday, 2,586; calves, 183; shipped Saturday, 333 cattle; no calves. The market opened strong to a shade higher, but closed about steady. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price.	No.	Ave. Price.
136	1.358 \$4.60	54	1.178 \$4.45
25	1.253 4.40	2	1.155 4.35
19	1.084 4.32½	3	1.120 4.30
13	998 4.20	21	1.030 4.15

WESTERN STEERS.			
No.	Ave. Price.	No.	Ave. Price.
77	1.190 \$4.45	33	1.271 \$4.35
63	1.280 4.25	22	910 4.15
9	978 4.10	6	886 4.00
997	9.90	1	1.130 3.95

NATIVE HEIFERS.			
No.	Ave. Price.	No.	Ave. Price.
13	507 \$4.60	10	617 \$4.55
1	890 4.40	5	670 4.35
27	612 4.25	1	991 4.20
24	861 4.10	25	656 3.90

NATIVE COWS.			
No.	Ave. Price.	No.	Ave. Price.
2	1.475 \$3.90	3	1.168 \$3.85
5	1.218 3.75	7	1.007 3.50
3	656 3.25	1	1.101 3.00
1	610 2.50	1	940 2.00

NATIVE FEEDERS.			
No.	Ave. Price.	No.	Ave. Price.
22	1.159 \$4.35	23	1.073 \$4.30
1	930 3.50		

NATIVE STOCKERS.			
No.	Ave. Price.	No.	Ave. Price.
4	747 \$4.90	33	687 \$4.75
27	682 4.60	13	617 4.50
3	526 4.25	2	765 4.20
1	440 3.20	1	620 3.00

Hogs—Receipts since Saturday, 7,761; shipped Saturday, 1,932. The market was weak to lower. The following are representative sales:

67...275 \$3.85	60...375 \$3.85	57...265 \$3.82½
69...265 3.80	69...256 3.80	81...237 3.80
64...260 3.80	62...283 3.80	76...259 3.80
72...243 3.80	87...240 3.77½	70...281 3.77½
79...230 3.75	67...250 3.75	65...293 3.75
86...241 3.75	72...265 3.75	65...282 3.75
69...244 3.72½	76...227 3.72½	75...266 3.72½
87...215 3.72½	62...275 3.72½	148...253 3.72½
91...208 3.71	91...193 3.70	64...182 3.70
60...204 3.70	58...215 3.70	55...238 3.70
68...222 3.67½	69...223 3.67½	79...231 3.67½
81...226 3.65	86...210 3.65	14...176 3.65
74...232 3.62½	102...181 3.62½	90...197 3.62½
84...205 3.60	93...183 3.60	96...161 3.57½
90...186 3.55	86...184 3.55	125...133 3.50
81...163 3.50	104...137 3.45	105...121 3.45
11...125 3.40	13...126 3.30	39...101 3.30
66...122 3.25	66...94 3.10	5...84 3.00

Sheep—Receipts since Saturday, 2,066; shipped Saturday, 247. The market was 5 to 10c higher and active. The following are representative sales:

241 Col. lbs. 73 \$5.35	175 Col. lbs. 73 \$5.35
97 Col. lbs. 74 5.35	497 Col. lbs. 81 5.30
223 N. M. y & s 86 4.85	224 N. M. y & s 83 4.85
210 alp. yrl. 97 4.25	2 bulls. 2.00

Horses and mules—Supply light. Several new buyers came in, and there was a strong inquiry for general utility stock. The mule market was quiet at the opening with the exception of the class of stock required to fill the government contract. Prices nominally steady.

St. Louis Live Stock.

ST. LOUIS, April 25.—Cattle—Receipts, 2,500; market strong; native shipping steers, \$4.35@5.25; light and dressed beef and butcher steers, \$3.75@5.10; stockers and feeders, \$3.10@4.50; cows and heifers, \$2.00@4.65; Texas and Indian steers, \$3.75@4.50; cows and heifers, \$2.50@3.25.

Hogs—Receipts, 6,500; market 5 to 10c lower; yorkers, \$3.70@3.80; packers, \$3.70@3.85; butchers, \$3.80@3.90.

Sheep—Receipts, 600; market steady; native muttons, \$4.00@4.60; lambs, \$4.25@5.50, with springs, \$7.85@8.00.

Chicago Live Stock.

CHICAGO, April 25.—Cattle—Receipts, 11,500; market strong to 10c higher; beefs, \$3.90@5.35; cows and heifers, \$2.25@4.60; Texas steers, \$3.75@4.50; stockers and feeders, \$3.70@4.75.

Hogs—Receipts, 46,000; market active, steady to be lower; light, \$3.70@3.95; mixed, \$3.80@4.00; heavy, \$3.75@4.05; rough, \$3.75@3.80.

Sheep—Receipts, 11,000; market strong to 10c higher; native sheep, \$3.25@4.70; western, \$3.75@4.60; lambs, \$4.00@5.60.

Chicago Grain and Provisions.

	April 25.	Opened	High'st	Low'st	Closing
Wht.—May....	1 15	1 20	1 15	1 19½	92½
July....	93½	93½	90½	92½	93½
Sept....	82	83½	81½	83½	84½
Corn—April....	31½	33½	33½	33½	34½
May....	31½	33½	34½	33½	34½
July....	31½	33½	34½	33½	34½
Oats—April....	27½	29½	27½	28½	28½
May....	24½	25½	24½	25½	25½
July....	24½	25½	24½	25½	25½
Pork—April....	11 00	11 25	11 00	11 20	11 20
May....	11 17½	11 47½	11 10	11 42½	11 42½
July....	5 60	5 70	5 60	5 62½	5 62½
Lard—April....	5 62½	5 77½	5 62½	5 72½	5 72½
May....	5 45	5 60	5 45	5 52½	5 52½
July....	5 50	5 67½	5 50	5 60	5 60

Kansas City Grain.

KANSAS CITY, April 25.—Wheat—Receipts here to-day were 168 cars; a week ago, 90 cars; a year ago, 26 cars. Sales by sample on track: Hard, No. 1, nominally \$1.02; No. 2 hard, 99¢@1.02; No. 3 hard, 97¢@99¢; No. 4 hard, 95¢@97¢; rejected hard, 90¢. Soft, No. 1 red, nominally \$1.00; No. 2 red, \$1.02@1.05; No. 3 red, \$1.00@1.01; No. 4 red, 98½¢@97¢; rejected red, nominally 93¢@95¢. Spring, No. 2, 93¢@1.00; No. 3 spring, 90¢@97¢; rejected spring, nominally 88¢@90¢.

Corn—Receipts here to-day were 104 cars; a week ago, 66 cars; a year ago, 205 cars. Sales by sample on track: Mixed, No. 2, 30¢@30½¢; No. 3 mixed, 28½¢@30½¢; No. 4 mixed, nominally 28½¢@29¢. White, No. 2, 30½¢@31½¢; No. 3 white, 30¢@31¢; No. 4 white, nominally 29½¢.

Oats—Receipts here to-day were 18 cars; a week ago, 9 cars; a year ago, 15 cars. Sales by sample on track: Mixed No. 2, 29¢@29½¢; No. 3 mixed, nominally 27¢. White, No. 2, 29½¢@29½¢; No. 3 white, 28½¢@28½¢; No. 4 white, nominally 27¢.

Rye—No. 2, nominally \$4.00; No. 3, nominally \$3.80; No. 4, nominally \$3.60.

Hay—Receipts here to-day were 38 cars; a week ago, 41 cars; a year ago, 33 cars. Quotations are: Choice prairie, \$8.50@8.75; No. 1, \$8.00.

83.25; No. 2, \$7.25@7.75; No. 3, \$6.75@7.00; choice timothy, \$10.50; No. 1, \$9.50@10.00; No. 2, \$8.50@9.00; choice clover and timothy, No. 1, \$8.00@8.50; No. 2, \$7.00@7.25; pure clover, \$7.25@7.50; packing, \$4.00.

Kansas City Produce.

KANSAS CITY, April 25.—Butter—Extra fancy separator, 17c; firsts, 14c; dairy, 12c; 15c; country roll, 10c@12c; extra fancy, 13c; store packed, 10c@12c; fresh packing stock, 9c@11c.

Eggs—Strictly fresh, 9c per dozen. Poultry—Hens, 6½¢; broilers, \$3.00@4.00 per doz.; roosters, 15c each; ducks, 6c; geese, 4c; hen turkeys, 9c; young turkeys, 8c; old turkeys, 7c; pigeons, 75c per dozen.

Apples—Fancy Missouri Pippin, \$3.00@3.50; fancy Ben Davis, \$3.00@3.25; choice to fancy, \$2.75@3.00; Winesaps, \$3.50@4.00; Willow Twigs, \$3.50@4.00. In a small way varieties are selling at 40¢@50¢ per half bu.

Vegetables—Cabbage, \$2.00 per 100-lb. crate. Beets, 25¢@40¢ per bu. Green and wax beans, \$2.50@3.00 per crate. Navy beans, hand picked, \$1.12½@1.15 per bu. Onions, \$1.00@1.25. Lettuce, home grown, \$1.00 per bu. Spinach, home grown, 40¢@75¢ per bu.

Potatoes—New, Texas, \$1.00 per ½ bu. crate; old, northern stock, fancy, sacked, Burbanks, 70¢@75¢; choice to fancy mixed, bulk, 60¢@65¢; Minnesota and Dakota, bulk, 65¢@70¢; Colorado stock, fancy, sacked, 75¢@80¢; home grown, sacked, 40¢@50¢. Sweet potatoes, 60¢@75¢. Seed potatoes, northern grown, Early Rose, 75¢; Early Ohio, 75¢; Red river stock, 80¢.

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L. A. ALLEN, CHAS. W. CAMPBELL, PEYTON MONTGOMERY, Cattle Salesmen.
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Correspondence and consignments solicited. Good sales, prompt returns. Ample capital. Twenty years actual experience. Market reports free on application.

15,000,000 LBS. WOOL

That's what we handled last year. That's a business of sufficient size to attract the manufacturer.

We sell direct to the manufacturer and do not peddle your wool out in small dribs. **We make liberal advances** on consignments and charge only **at the rate of 5 per cent. per annum interest** on the same. We supply sacks free to our patrons. We have had **thirty-one years' experience.** Our circular letter will keep you informed as to the conditions of the wool market. Write us before you consign your wool. **We can make money for you.**

SILBERMAN BROS. 122-124-126-128 MICHIGAN STREET, CHICAGO, ILL.

WE HAVE NO AGENTS

but have sold direct to the consumer for 25 years at wholesale prices, saving him the dealer's profits. Ship anywhere for examination. Everything warranted. 118 styles of Vehicles, 55 styles of Harness. Top Buggies, \$36 to \$70. Surreys, \$50 to \$125. Carriages, Phaetons, Traps, Wagons, Spring-Road and Milk Wagons. Send for large, free Catalogue of all our styles.

No. 77. Surrey Harness, Price, \$16.00. As good as sells for \$25.

No. 608 Surrey. Price, with curtains, lamps, shades, apron and fenders, \$60. As good as sells for \$80.

ELKHART CARRIAGE AND HARNESS MFG. CO. W. E. PRATT, Sec'y, ELKHART, IND.

NOW IS THE TIME TO PREPARE FOR SPRING WORK.
And Here is the Biggest Bargain on Earth.

DOUBLE FARM HARNESS, No. 1204 FOR \$11.10.

Three-fourth inch Bridles throughout, heavy leather team collars, varnished iron bound hames, 1½ doubled and stitched traces with ¾ ft. chain at end, flat leather pads, ¾ inch back straps, ¾ inch hip straps, ¾ in. by 13 ft. leather lines.
Our prices with hip straps, Complete, per set \$11.10
breaching " 11.90
If desired without collars, deduct 1.50
Remember we are the largest Harness and Carriage House in the Northwest. Send for our new illustrated Catalogue.

NORTHWESTERN HARNESS & CARRIAGE CO.,
172 Sixth St., St. Paul, Minn.

When you write mention THE KANSAS FARMER.

Kansas City Stock Yards

are the most complete and commodious in the West

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

	Cattle and Calves.	Hogs.	Sheep.	Cars.
Official Receipts for 1897	1,921,962	3,350,796	1,134,236	123,047
Slaughtered in Kansas City	965,287	3,084,623	805,268	
Sold to feeders	665,615	841	151,389	
Sold to shippers	216,771	263,592	91,576	
Total Sold in Kansas City 1897	1,847,673	3,348,556	1,048,233	

CHARGES: YARDAGE—Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, 80c per 100 pounds. CORN, 60c per bushel. OATS, 60c per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

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

WHY NOT....

Build your own Fence?
We can tell you a way that
is cheaper and better
than any other wire fence made.
Send for our 1898 catalogue.

Peerless Fence Co. Holly, Mich.

Machine \$10

TO BUILD THE STRONGEST AND BEST WIRE FENCE.

16 to 24 Cents per Rod.

No farm rights, royalties or patent stays to buy. AGENTS WANTED. Write for circular. The Bowen Cable Stay Fence Co. NORWALK, OHIO, U. S. A.

\$35 per 100 Rods

for the best wood and wire fence made. Wire of No. 11 galvanized steel; wood stays of painted oak. Will turn everything but wind and water. All wires have individual tension—stretch one or all. Shipped in rolls or knock down. Anybody can build it easily. Agents wanted. Don't buy until you get our cat. and price.

BUCHANAN FENCE CO., Box 8, Smithville, Ohio

WAR NEWS!

The papers are full of startling statements. Rash conclusions are foolish and unfortunate. Try and prove False Fence before you make a decision. See our ad. in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

The Poultry Yard

KANSAS STATE POULTRY ASSOCIATION.
President, A. M. Story, Manhattan.
Secretary, J. W. F. Hughes, Topeka.

Keeping Quality of Infertile Eggs.

During the season for selling eggs for hatching we hear more or less complaint about rotten eggs. Beginners are apt to believe that a rotten egg is an infertile egg, and that, necessarily, it must have been old before shipping.

On the other hand, a rotten egg is good proof that the egg was fertile, but the germ not being strong, it soon died after the heat from the hen or incubator started to develop it.

The truth is that eggs do not become rotten when there is no male bird in the yard. They rather dry up. An egg from a pen of hens that are not mated will pass through three weeks of incubation and come out clear. I. K. Felch said that an egg not impregnated will come out from under a hen at the end of three weeks' incubation perfectly clear; while one that is impregnated, if sat on forty-eight hours, and then taken out, will at the end of three weeks surely be of bad odor; while an egg not impregnated may be sat upon twelve days and then be used for cooking purposes, and prove as good as the common run of store eggs.

"The other day," wrote Mr. Felch, "I boiled twelve eggs taken out of the incubator, after twelve days' incubation. Ten were clear, two showed the germ to have started and death at an apparent age of two days. The result was the two impregnated eggs when cut open had an unpleasant odor, and the white was tarnished, while the yolk had a brassy-white tinge, and the dead germ was not hardened by boiling. Of the other ten that showed no signs of impregnation, I ate four, and they were to all appearances and to the taste as good as those boiled twelve days old that had been kept in the pantry. When an egg that has never been in an incubator is broken, the albumen adheres more closely together, and does not run over so large a surface as will that of eggs which have been subjected to the heat of the incubator for ten days. This seems to be all the difference."

An infertile egg, placed under the heat of 103° for one week will, in appearance and taste, be equal to an infertile egg that has been laid away for two weeks. In some sections poultrymen find a market among bakers for all the infertile eggs they test from the incubator hatches.—Homestead.

Poultry Notes.

Dirty water may cause gapes.

Get rid of a weakling rooster quick.

It is safest to change roosters every year.

Bread and milk make a good dish for the hen.

A little tobacco in the nest drives off vermin.

Never let the young rooster run with the hens.

It is a big mistake to put too many eggs under a hen.

If meal is mixed in boiling water the food is cooked a little and is better.

Look out for sudden showers, which kill a good many chicks in the spring.

One writer says that his stand-by to make hens lay in winter is cabbage leaves.

Now get some powdered charcoal for use in the feed in case the bowels are loose.

Kerosene is a very valuable thing about the hen house. Don't be afraid to use it.

Banish the parasites and you do more than half the work of successful poultry raising.

Keeping poultry in the orchard all through the spring and summer will prove profitable.

The hens of most breeds pass their prime at two to three years old. The Leghorn will last longer.

The symptoms of cholera are drooping wings, ruffled feathers, black comb and wattles, and diarrhea.

Dishes in which milk is fed to poultry should be thoroughly cleansed as soon as the fowls are done feeding.

Eggs that are fed to chicks should be boiled twenty minutes, and they will then be in a very digestible condition.

The novice ought to begin the poultry business on a small scale, however much he may have read on the subject.

Both good food and water should be

ready soon after the fowls come off the roost, for they are both hungry and thirsty.

Never allow fowls to inbreed promiscuously. If you inbreed do it for a purpose, understanding just what you desire to accomplish.

An exclusive diet of grain will not give the best results if eggs are to be expected outside of the natural laying season. Some vegetable food is needed as a tonic or corrective of digestion. Animal food is the talisman that changes the combination of hen power plus nutrition into eggs.

The Thieves' Market.

In writing of his trip in Mexico, P. V. Collins mentions an experience in a crowd upon the occasion of the commemoration of the repulse of Maximilian's forces at Puebla. He says:

"The anniversary is as great a day to Mexico as our Fourth of July is to us, and is observed in much the same way as we celebrate our holiday. There was a military parade in the morning, followed by an oration, under the trees of the Alameda, in the afternoon.

"While I was watching the parade in front of the National Palace a thief deftly lifted my scarf pin from my necktie. I was told, later, that an editor of a Mexican paper once made a bet that he could walk through the crowded plaza on a holiday and not lose his scarf pin. He tried it, walking around the plaza once, and, returning to his office, found that he had lost his bet and his pin. Old residents, sometimes, warn tourists that Mexican thieves will steal the gold fillings from their teeth if they don't keep their mouths shut.

"Within a block of the National Palace exists the Thieves' Market, a most unique feature of Mexico. Here is a public 'fence,' under government sanction and protection, where professional thieves bring stolen property and offer it for sale. Nothing here displayed can be reclaimed, even by the rightful owners. If, an hour after I had had my scarf pin stolen, I had walked two blocks from where it was taken and had there, in the Thieves' Market, identified it, in the hands of the thief, I could not have recovered it without buying it.

"All sorts of bargains may be secured in this strange market—frequently rich works of art, jewels of considerable value, laces, silks, and bric-a-brac, but most of the articles offered are cheap, second-hand goods, such as old revolvers, locks, hammers, clothes, etc. That this relic of barbarism is tolerated within the shadow of President Diaz' palace is an anachronism which indicates the newness of Mexican modern civilization."

Kills the Germs.

Bannerman's Phenyle Disinfectant and Germicide has been tested by many leading stock breeders as a preventive to hog cholera and other diseases among hogs and poultry. It has the endorsement of all users from results obtained through its use. Send for circulars. Address Bannerman & Co., Chicago, Ill.

200 EGG INCUBATOR, ONLY \$10
F. M. CURYEA, Hanna, Ind.

THE IMPROVED VICTOR Incubator
Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars FREE.
GEO. ERTLE CO., QUINCY, ILL.

HATCH Chickens BY STEAM—EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made.
Send for Circulars FREE.
114 to 122 S. 6th St., Quincy, Ill.

THE STANDARD INCUBATOR

A low-priced machine with a record unequalled by any. An incubator that anyone can operate. For free illustrated circulars and testimonials address the
Sure Hatch Incubator Co.
Clay Center, Nebraska.

THE CROWN Bone Cutter
For cutting green bones. For the poultryman. Best in the world. Lowest in price. Send for circular and testimonials. **Wilson Bros., EASTON, PA.**

It rests with you whether you continue the nerve-killing tobacco habit. **NO-TO-BAC** removes the desire for tobacco, without nervous distress, expels nicotine, purifies the blood, restores lost manhood, makes you strong in health, nerve and pocket.
STOP SMOKING. 1,000 boxes sold, 400,000 cases cured. Buy your own druggist, who will vouch for us. Take it with a will, patiently, persistently. One box, \$1, usually cures; 3 boxes, \$3.50, guaranteed to cure, or we refund money.
Selling Remedy Co., Chicago, Montreal, New York.

ARMSTRONG & McKEIVY Pittsburgh.
REYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR Cincinnati.
ROCKSTEIN Cincinnati.
ATLANTIC New York.
BRADLEY New York.
BROOKLYN New York.
JEWETT New York.
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JOHN T. LEWIS & BROS CO Philadelphia.
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KENTUCKY Louisville.

BARYTES, Whiting, Silica, Zinc, etc., etc., are used to adulterate White Lead, because they are cheaper (cost less) than White Lead, and are branded and sold as "White Lead," "Pure White Lead," etc., because they cannot be sold as Barytes, Whiting, Silica and Zinc.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also folder showing pictures of house painted in different designs or various styles or combinations of shades forwarded upon application to those intending to paint.

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

OSBORNE FARM IMPLEMENTS
The largest complete line of farm machinery manufactured by any single concern in the world; embraces: **Osborne Columbia Harvester and Binder, Rival Disc Harrows, Columbia Inclined Corn Harvester and Binder, All-Steel Hand Dump Rakes, Columbia Reaper, No. 8 Reaper, All-Steel Self-Dump Rakes, Columbia Mower, (1 & 2-horse), Spring-Tooth Harrows, Flexible and Reversible Disc Harrows, Adjustable Peg-Tooth Harrows, Osborne Combination Harrows, Slick Spring-Tooth Harrows, Horse Hoe Cultivators, Osborne All-Steel Center Drive Toppers, etc.**
Every machine is fully warranted and is the best of its class that can be produced with good material, complete equipment, superior skill and long experience.

THE OUT HERE SHOWN is that of our Osborne Columbia Harvester and Binder.
It is full of features calculated to make it the best machine of its kind for the farmers' use. The two most important features, because they directly affect the draft and ease of operating the machine as well as making it long lived, are the perfected swivel self-aligning boxes and our patented roller bearings. Two horses draw it with ease; channel steel bar main frame; a 34-in. main wheel with 9-in. face gives easy motion and perfect traction and power; easiest raising and lowering device known; platform frame and bottom all steel—strongest and lightest; straight drive pitman—easy cutting; perfect adjustment reel; low open and elevators—great capacity; no side draft or neck weight. Don't buy until you see our local agent. Handy book for farm and house free.

D. M. OSBORNE & CO., St. Louis, Mo.

DISSTON'S
It will pay you to buy a new saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are **FULLY WARRANTED**. For sale by all dealers. Send for PAMPHLET OR SAW BOOK, mailed free. **HENRY DISSTON & SONS, Philadelphia, Pa.**

PERFECT FARM FENCE Made of best double 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.**

CAMPBELL'S SUB-SURFACE PACKER

Is the only Genuine and Reliable Rain Maker.

In the springtime when you begin to work the soil, it contains all the moisture necessary to mature a crop if you could but keep it. **Pack the Soil** with this machine and you preserve all the moisture. You need not care whether it rains or not. **No experiment but an assured fact.** It is indispensable in droughty semi-arid sections. With a supply of moisture in the sub-soil to draw upon, there can be no drouth. Made in two sizes, for 2 and 4 horses. Don't plow until you get our **Campbell Method of Tillage.** Also our catalogue of "Ottawa" Cylinder Dustless Shellers; "Ottawa" Farm Wagons and full line of Corn Cultivating Tools. Sent free to any address.

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PLEASE MENTION KANSAS FARMER WHEN WRITING ANY OF OUR ADVERTISERS.

BUGGY HARNESS.

BUY FROM MANUFACTURER DIRECT.

Our No. 201, with one-inch trace, hame and collar, \$6 per set. Our No. 19, with one-inch trace, double hip strap, hame and collar, \$9 per set. Our No. 20, with one and one-quarter inch trace, single strap throughout, with curved breast collar, nickel or imitation rubber, at \$12 per set. Goods shipped anywhere on receipt of price, or C. O. D. if \$1.50 is sent with order. Mention size of collar. A. BURE, 2250 W. Jefferson, Louisville, Ky.

WELL MACHINERY

Send for catalogue illustrating the old Reliable Peck Well Auger, Rock Drills, Hydraulic Machinery, etc. FREE. Have been in use over 13 years and are no experiment. W. M. THOMPSON CO., Successors to Sioux City Engine & Iron Works, SIOUX CITY, IOWA.

PORTABLE WELL DRILLING MACHINERY.

Established 1867. Covered by patents. Machines drill any depth both by steam and horse power. Twenty different styles. Send for free illustrated catalogue. Address, KELLY & TANEYHILL, Waterloo, Iowa.

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

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Manufactured by KIMBALL BROS., 1004 Ninth St., Council Bluffs, Iowa.

LIGHTNING WELL MACH'Y
PUMPS, AIR LIFTS,
GASOLINE ENGINES.
CIRCULARS FREE.
THE AMERICAN WELL WORKS,
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THE ONLY "QUICK REPAIR" PUMP
SQUIRTS tell the story.
RED JACKET MFG. CO.
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Pressure between burrs in grinding is carried on chilled roller bearings. Large inside burr revolves twice to sweep's 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.

IT WILL PAY to get our latest CATALOGUE of the greatest line of HAY TOOLS on Earth. A postal will bring it. Also valuable information about Hay and Hay Bams. Our slings handle straw, fodder and all kinds of forage, and work with an elevator. Now is the time to prepare for harvest. Write at once. Agents wanted. Address LOUDEN MACHINERY CO., Fairfield, Iowa.

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If you are thinking about TRACTION ENGINES We present "THE NEW RUMELY" which is the climax of 44 years' experience in engine building. Embodying all the best inventions of our own and many others. IT IS STRONG—SIMPLE—DURABLE AND EASILY OPERATED. But there is more to it—explained in detail in our new catalogue—FREE. M. RUMELY CO., LAPORTE, IND.

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Buy direct from factory at Wholesale Prices. 30 per cent saved. Guaranteed for two years. Write to-day for new beautifully illustrated Catalogue, send 8 cents in stamps. Highest awards given us at World's Fair, Atlanta Exposition, Nashville Centennial Exposition. Price \$44. Alliance Carriage Co. 287 E. Court St. Cincinnati, O. Price \$60.

A SMALL THRESHING MACHINE

Something for the farmer, who can do his own threshing, with less help and power than ever before. We also make a full line of Sweep and Tread Powers. The Columbia Thresher has great capacity, and can be run by light power. Send for illustrated catalogue, giving testimonials. BELLE CITY MFG. CO. Bx 78 Racine, Wis.

HODGES NEW STEEL HEADER

In the outline shown we present to the trade, the very latest and the best production known to the art of header construction.

This is the accumulated experience of 38 years of header manufacture. We claim for it that it is perfect in material, construction, working ability, ease of draft, durability and poise and balance. Listen—Wheels are high, broad and strong, affording easy draft, perfect traction and application of power; the frame is of angle but strongest frame procurable. Power is applied by a steel main drive chain of great strength and durability; a perfectly adjustable reel. New steel trussed tilting lever—very sensitive to touch; a new, simple and positive lever within easy reach for throwing in and out of gear. In short, it is intended to be a PERFECT HEADER and we believe it is such. Ask your dealer for THE HODGES, insist upon having THE HODGES and buy nothing but THE HODGES if you wish the most perfect HEADING MACHINE ever produced. Manufacturers also of the Hodges Hercules Mowers, Hodges "Lad" and "Lassie" Hand and Self Dump Rakes, Monarch and Acme Sweep Rakes and Acme Stackers. Our hand-some new illustrated catalogue explains them all fully. Write for it before you buy; it is free. AOME HARVESTER COMPANY, PEKIN, ILL.

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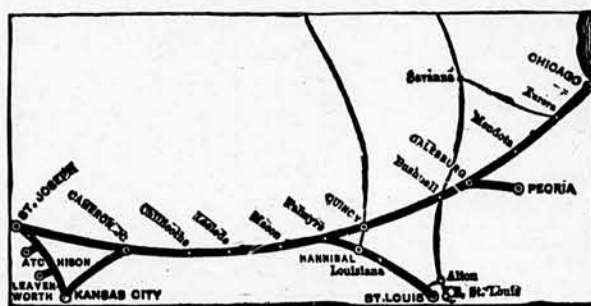
are the strongest, most improved and best form of cycle construction. DON'T BE CONFUSED BY THE WORD "CHAINLESS." There are many untried chainless devices on the market.

COLUMBIA BEVEL-GEARS are The Original, The Standard. Their superiority over chain wheels has been demonstrated on the road. Columbia Chain Wheels, \$75. Hartfords, \$50. Vedettes, \$40, \$35

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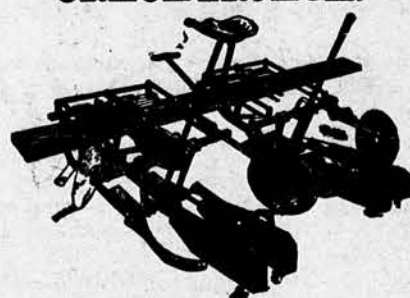
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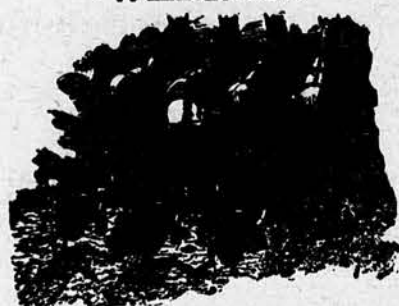
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All Steel—Never Wears Out. Dust-proof Boxings. Levers to Raise Knives and Fenders.

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Best Knife Cultivator on Earth for Listed Corn.

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For sale by one dealer in every town. Mention Kansas Farmer.

HE PAYS THE FRAYT
BEST SCALES. LEAST MONEY
JONES OF BINGHAMTON N. Y.

SAVE YOUR CROPS
Get rid of Gophers, Ground Squirrels, Prairie Dogs, Moles, Rats, and all burrowing animals BY USING PEERLESS GOPHER KILLER. Costs less than 1c. to treat each burrow and IT GETS THEM ALL—old and young, within 15 minutes. They never dig again. No poison. Big increase in profits if used during plowing and planting season. Circulars, prices, and terms to Agents Free. H. H. Lee Co., 1110 Farnam St., Omaha, Neb.

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Wind Mills and Towers, Complete, Set Up

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THE Blower Wind Mill
For farmers who cannot afford one of the high-priced steel mills.
Pumps, Pipe, Cylinders and Screens.
Send for illustrated circulars and price list before buying.
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This will interest those who have doctored with "medical companies" and "free prescription" fakes and electric belts, until they are thoroughly disgusted. I am a well known physician of Chicago. I haven't a remedy that will do wonders in a few days, but with patience and the correct use of my treatment I will guarantee to MAKE A MAN OF YOU IN TIME. For a short time I will send a full month's treatment of my "NERVE-SEEDS" with some valuable private instructions, for \$1.00, or 6 boxes (a full course) for \$5.00. I HAVE CURED THOUSANDS AND CAN CURE YOU. Write to me in confidence. All medicines sent in plain wrappers. DR. THOMAS P. GRAHAM, 114 Dearborn Street, Room 1109, Chicago, Ill. Hours—10 a. m., 6 p. m.

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Then take the Santa Fe Route to Chicago. Thirty miles the shortest; rock-ballasted track; few grade crossings; vestibuled trains of Pullman palace sleepers and free reclining chair cars lighted by electricity. Dining cars serve all meals and you pay only for what you order. If you want safety, speed and comfort,

Travel via Santa Fe Route.

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GROUND ROCK SALT FOR STOCK.

Use Rock Salt
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Hides, Pickles,
Meats, Ice Cream,
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Mines and Works,
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Special Want Column.

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

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

WANTED.—One Mammoth Jack, and young Coach stallion. A. L. Smith, Lawrence, Kas.

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

AFTER MAY FIRST.—Eggs from our very best matings, one dollar. Winners at the big shows, including Mid-Continental. Barred Rocks and light Brahmas. Spicer Bros., Geneva, Kas.

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

FOR SALE.—The imported French Coach stallion Freysinet, color dark brown, weight 1,350. He took first premium and sweepstakes at Kansas State fair two years in succession. Will sell at a low price. Address or call on Nathan Brobst, Vidette, Shawnee Co., Kas., or Bradford Miller, Topeka.

FOR SALE.—A bargain—or will trade for two young sows, registered Poland-China boar, 4 years old, weight 525 pounds. An excellent fellow. Address John D. Knox, Jr., Topeka, Kas.

FOR SALE.—Mammoth White Kafir, black hulled; greatly superior to common varieties; \$1 per bushel. M. Madison, Topeka, Kas.

A SPLENDID STOCK of Roses, Fuchias, Carnations, Heliotropes, Begonias, etc., sent by mail or express. Satisfaction assured. Send for price lists. Tyra Montgomery, Florist, Larned, Kas.

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EGGS, 75 cents per thirteen. S. C. Pure White Leghorns. A. F. Hutley, Paxico, Kas.

TO FARMERS AND STOCKMEN.—I can still furnish the genuine White French Artichoke at \$1 per sack of two bushels f. o. b. J. W. Gehr, Crab Orchard, Neb.

FARM BEE-KEEPING.—Sample free. Busy Bee, St. Joseph, Mo.

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

ORCHARD PARK POULTRY YARDS.—Prize-winning Barred Plymouth Rocks exclusively. Eggs, \$1 per thirteen. Mrs. J. R. Whitney, 1411 Massachusetts St., Lawrence, Kas.

WANTED.—All the sheep-growers in the State of Kansas to ship us their wool for which we will remit promptly the highest market price, thereby saving you commission, freight and delay. We do all kinds of custom work. Make your wool into blankets, flannels or cassimeres. Topeka Woolen Mill Co., Topeka, Kas.

WE BUY Cane, Millet, Kafir Corn seed. Send samples. Hubbard's Seed Store, 520 Kansas Ave., Topeka, Kas.

FOR SALE OR EXCHANGE.—One registered Holstein-Friesian bull, 3 years old, and one yearling, subject to register. Correspondence solicited. G. J. Coleman, Mound Valley, Kas.

MISSIONARY B. P. R.'s.—Headed by a 92 point cockerel; \$1 per 15. All proceeds from this pen, eggs and stock goes to foreign missions. Other pens, including third and fifth Mid-Continental prize-winners, \$2 per 15. Bronze Turkey eggs (Mackey strain), \$2 per 5. Mrs. F. A. Hargrave, Richmond, Franklin Co., 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.

EGGS.—\$1 per 15. English Buff Cochins exclusively. Mrs. M. L. Somers, Altoona, Kas.

BLACK LANGSHAN EGGS.—From pens scoring 91 to 95, only \$1 per thirteen. A. S. Parson, Garden City, Kas.

75 BERKSHIRES.—Boars and gilts, weighing 125 to 250 pounds, sired by imported Lord Comely 34744 and Golden King V. 43936. These are pigs of choicest breeding and extra individuality. Prices \$12.50 and \$15 for next ten days. Satisfaction guaranteed. Wm. B. Sutton & Son, Russell, 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.

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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.

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

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.

FARM FOR SALE.—\$500 buys an eighty-acre farm in Edwards county, two miles north of Kinsley, Kas. A living stream of water runs over the farm. The buyer will get a clear deed of it and all tax receipts paid in full. A. L. Brundage, 30 West Twenty-fourth St., Chicago, Ill.

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FOR SALE.—A Wilcox & White organ for \$35, at 1338 Mulvane St., Topeka.

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

ARTICHOKES.—Cheapest and best of all hog feed. Often yield 1,000 bushels per acre. Price, single bushel, \$1. Can with order. Write for prices and freight rates to all points. H. E. Shuler & Co., 2600 East Fifteenth St., Wichita, Kas., or H. E. Shuler & Co., Box 227, Topeka, Kas.

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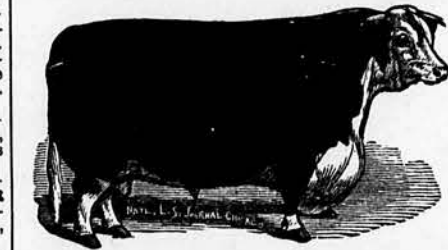
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