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BREEDERS' DIRECTORY.

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Twenty-five very fancy fall boars, some of which will do to head any herd or to go in any show ring. Sired by Knox All Wilkes 18179 S. and Highland Chief 18334 S., by Chief Tecumseh 2d 9115. No better sires in any herd. Our prices very low if taken at once. One hundred fine spring pigs by same sires.
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Mated for best results. Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER.
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A choice lot of gilts sired by Ideal U. S. and bred to Tecumseh Chief. Also some good Tecumseh Chief gilts bred to Look Over Me (he by old Look Me Over) and some good fall pigs, both sexes. Write and get my prices or come and see.
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Brood sows by Wren's Medium, Hadley M. Washington, Protection Boy, Moss Wilkes Tecumseh (by C. P. 2d). Tanner 19212, a grandson of the famous Hildreth, 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.
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REGISTERED POLAND-CHINA SWINE

King Perfection 4th 18744 S. at head of herd, assisted by Tecumseh Wilkes 12934 S. and Lambing Ideal 14050 S. The sire of last named is Gov. C. by Black U. S. We have added several very finely bred sows to our herd. Write for particulars. Address either
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Kansas City HERD Poland-Chinas.
W. P. GOODE, Lenexa, 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 10 Chester White swine and Light Brahma poultry. **J. T. LAWTON, BURTON, KAS.,** proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

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Composed of the **BEST POLAND-CHINA Blood Known.**

The present offering consists of August, September and October pigs—10 boars and 20 sows—very choice. The stock by or bred to Kievers' Model, What's Wanted Jr., Hildreth, Wilkes, Waterloo Chief, etc. For further information address,
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BLUE MOUND HERD BERKSHIRE SWINE.

Herd boars, Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also breed Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.

Allen Thomas, Blue Mound, Linn Co., Kas.

Nation's Poland-Chinas.

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

SUNFLOWER HERD OF SHORT-HORN CATTLE and POLAND-CHINA SWINE.

125 head in herd, with Sir Knight 124403 at the head. Females are by such imported Cruickshank bulls as Craven Knight 90223, Thistle-top, Master of the Rolls, Earl of Gloster 74523, Viscount Richmond, Knight Templar 88353, etc. Forty very choice brood sows. Young stock for sale.
ANDREW PRINGLE, Harveyville, Kas.

POLAND-CHINAS.

Guy Darkness 18292 and Best Nims 19012, herd boars. Sept. '97 boars and gilts for sale. Guy Darkness gilts will be bred to Best Nims for fall farrow. Correspondence or inspection of herd solicited.
S. W. HILL, Hutchinson, Kas.

HIGHLAND FARM HERD

PEDIGREED POLAND-CHINAS.

Herd headed by Corwin I Know, a son of the noted Chief I Know 11922 S. Corwin I Know won second at 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 42919, 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 38786, she by One Price 4207; Kansas Chief 33615—she by Royal Chief's Best and out of Bell O. 74694. 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.

ESTABLISHED 1882. SERVICE FEE \$50.

KLEVER'S 1st MODEL

18245 S.

Sired by Kiever's Model 14664 S., the \$5,100 king of boars; first dam Graceful Maid (43851); second dam Graceful F. 3d (28670), litter sister to Old Look Me Over 9011, the \$3,000 boar. This gives Kiever'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.
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SIXTEEN TO ONE HERD

REGISTERED POLAND-CHINA SWINE.

Herd boars, Gold Standard Wilkes by Guy Wilkes 2d 17777 S. and Ideal Quality by Darkness Quality 2d 14361 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.

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 of Hadley Corwin Faultless, and by a son of Chief Tecumseh 2d. We can suit you in quality and price. Write us.



Breeder and shipper of thoroughbred Poland-China and Large English Berkshire swine and Silver-Laced Wyandotte chickens.

CATTLE.

ROCK HILL HERD OF SHORT-HORNS.

An Elbert & Falls "Waterloo" bull and Norton's "Clipper" Scotch bull "Cupid" head the herd. Ten Scotch and Scotch-topped daughters of the great Linwood "Lord Mayor" and several daughters of C. C. Norton's "Imp. Salamis" included. No heifers or bulls old enough for service for sale.
J. F. TRUE, Newman, Kas.

Twelve miles east of Topeka on U. P. railroad.

SILVER CREEK HERD SHORT-HORN CATTLE.

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

ROSE CREEK FARM 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.

DEER PARK FARM.

H. E. BALL, Proprietor.

Registered Jersey cattle. Young bulls and heifers for sale.

Registered Poland-China swine. Young boars for sale.

Farm two miles east of Topeka on Sixth street road.

T. P. CRAWFORD, Mgr., Topeka, Kas.

SO RISE 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 five years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 3 to 7 years old for sale.

Live Stock Artist.

F. D. TOMSON, 514 Monroe St., Topeka, Kas.

Portraits for framing and cuts prepared for advertising purposes. Breeders' correspondence solicited.

Agricultural Matters.

AS TO THE WORLD'S WHEAT SUPPLY.

The question of food supplies and the demands upon them is one of vital interest to those who produce them and to those who must obtain them. In Kansas and other grain-producing States the interests of all the people are promoted by scarcity in the world's supplies and consequent brisk demand and high prices. The question of shortage never confronts us here, and our interest in evidences of shortage or in foreign anxiety lest shortage be felt is based to some degree on our sympathy with those who may want, but to a larger degree upon the evidence it furnishes of the relation of supply and demand. That in that great workshop, that center of population and industry, Great Britain, there is actual fear of lack of bread is shown perhaps more plainly than was intended in the following discussion of "National Wheat Stores" which is copied from the Pall Mall Gazette in the London Cable:

"Thus far, we have heard through the press only the question of the dearth of bread discussed if a war were to break out in which we were involved, but the important body of men who form the backbone of England's wealth as a nation—the farmers—have not been considered in the matter, no doubt on account of their proverbial modesty. Taking a survey of the whole question outside the farming class, we find that there is a large section of the British public which considers that it would be best to have at least six months' supply of breadstuffs always in the country in order that our navy, in case of war, should be relieved from the duty of conveying grain ships to our shores to feed the 40,000,000 people of these isles. Another section maintains that such a reserve would not only prevent the enemy from starving us into a humiliating peace, or, as another section asserts, semi-starvation by reason of higher freights and insurance rates, but would prevent foreign merchants and speculators from holding grain at the bidding of a hostile nation until prices are greatly enhanced. There is, of course, a section composed of men who are unable to support any proposition of this kind, as it would affect their welfare by reason of keeping fluctuations within narrower limits; so they contend that such a reserve would be the means of depreciating the value of the merchandise they have to sell. Farmers have not yet been heard on this question, although they are the most affected, and they, as a body, contend that the establishment of government granaries on the lines set forth by the Yerburch committee would be beneficial to their interests for other reasons than that of the absolute security of the nation. They contend, first, that it will prevent the value of English wheat from falling below a fair paying price; secondly, that it will be necessary to sow better seed wheat, and so English wheat will regain the position it has lost as regards quality when compared with the foreign wheats on our markets; thirdly, by there being a government demand when grain is below a paying level, it will stimulate an increase in the acreage under wheat; fourthly, there will be a better demand created for farm land, and a larger proportion of our population will be required to work in our fields; fifthly, the presence of supplies in this country will prevent wild speculation and promote a healthier tone to all trades connected with the handling of breadstuffs. And, lastly, the 'staff of life' will be more nutritious than at the present time, as it will be made of better and more English wheat.

"In dealing with the first of the farmer's reasons it must be borne in mind that the government would only purchase grain at a fixed (low) price, and that priority should be given to the British grain, providing it came up to the standard required for storing purposes. The fact of the farmers having to grow wheat in order to at least be able to pass the government standard, 'that it was fit to store for some considerable time,' would mean that they would have to study the condition of their fields and choose a sample of seed wheat suitable to the soil, and, moreover, be able to produce in a fair harvest season wheat of such a quality that it could be stored with some advantage to its quality. In this connection it is a most curious fact that the farmers can always, or, at least, where they are not under any obligation to the buyer,

obtain a better price for wheat that is dry—that is to say, well matured—and like 'shot,' as the bread produced from a sack of such when ground into flour will not be close or heavy, but will be light and nourishing; moreover, the baker can from the flour of such wheat make a greater number of four-pound loaves from the sack. For those who are unacquainted with the most valuable composition of wheat, it should be mentioned that the quantity and quality of the gluten fixes the price of grain. For the flour miller has to produce for his customer, the baker, a product that will retain, by the strength of the gluten it contains, the most water, in order that the baker in his turn can not only make a fair profit by the water he sells, but satisfy his customer with a well-developed loaf. Now, it has been proved beyond doubt that wheat, when properly kept and handled in warehouses, will improve in quality, and therefore will command a better price than if sold as quickly as possible after harvest, which, unfortunately, is generally the case, as farmers require cash at that period to meet their Michaelmas dues. The general reader will appreciate how the farmer feels at the present time, when he sees the high price of wheat, and has none to sell, for in the whole of the United Kingdom there is not 1,000,000 quarters of English wheat, which means that at least £500,000 which should have enriched the farmer this past month has gone abroad—not even into our merchants' pockets, for they only have about 1,000,000 quarters of breadstuffs in stock to-

and heavier weight an increased price in the market would be obtained.

"The governments of the United States, Russia and Canada have farms on which experiments are carried out for procuring the best seed. With an increase in the quantity of wheat used by the miller and a better price prevailing on the market, it naturally follows that the farmer's third reason as set forth in the commencement of this article, will be accomplished; while the fourth reason is sure to follow when there is an increased demand and a better price for the home products. This would mean a relief to the overcrowded slums of our great towns, and a lessening of that dangerous class that is ever ready for violence and plunder should an opportunity arise. Dealing with the fifth reason, it is unfortunate, but nevertheless a fact, that when a body of men begins to speculate wildly, prices by this means are forced up so much above their real value that a fall comes so suddenly that many are ruined and the whole trade is disorganized. The result is that for some time the business done is so small and the whole trade so dull and uncertain that prices go nearly as much below their real value as they were artificially inflated, so that the poor producer is, as usual, the loser. Now if the government held a reserve stock of wheat to the extent of feeding our country for at least six months, no section of the trade dealing with breadstuffs would dare go wildly into speculation to hold grain, as the warehouses could always have their doors opened at a certain rate, and the

A Hole in Your Pocket



The butter fat that is being lost in the ordinary process of dairying is worse than a hole in your pocket and through which your coin may escape. The best way in the world to stop the leak is to use a

SHARPLES SEPARATOR.

SAFETY HAND for a little herd and LITTLE GIANT for a larger one.

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

to further that object, and also a better quality of gluten to retain water.

"In conclusion, it must, when considering the whole of this question, be borne in mind that when the government have once obtained the six months' supply, they will still require to purchase at intervals grain to replace the older parcels, which wheat would fetch a good price, being well kept and handled, while the new grain purchased for storage in the government granary could be of a still better quality than the wheat previously obtained. Thus would the standard of our native grain be raised, with the result that it would fetch a much better price on the market. The English farm-



THRASHING OATS, NEAR PLEASANT HILL, MO.

From a photographic view taken along the line of the Missouri Pacific Railway. Loaned by H. C. Townsend, general passenger agent, St. Louis, Mo.

day, so have been obliged to buy from the foreigner at enhanced prices.

"In dealing with the second of the five reasons, the farmers would have to sow good seed in order to get wheat fit to store, and in this conjunction it should be mentioned that years ago wheat used as a rule to weigh heavier than it does on the average now, because the quality of it was better; but owing to their being no regular standard of quality for English wheat on the markets in this country, farmers have sown inferior seed to produce a large crop, forgetting the question of quality and the weight per bushel, which really is a standard of quality. This is fully brought home to the British farmer in a very instructive article entitled, 'Home Produce, Imports, Consumption, and Price of Wheat Over Forty Harvest Years, 1852-53 to 1891-92,' which appeared in the Journal of the Royal Agricultural Society of England, on March 31, 1893, by Sir J. B. Lawes and Sir J. H. Gilbert. These gentlemen show that the prices of the home and the imported wheat varied considerably in the individual years; that during the earlier part of the period the price of the imported was generally lower, but during the later years higher, than that of the home wheat. It must be admitted that if the government were to purchase wheat for storage, they would fix a standard of quality which would be the means of establishing a national basis of price, and by this means all farmers would become well acquainted with the kind of wheat (as regards quality) that would be required, as well as its value as a food product. A finer quality of grain would then be sown, and by reason of its better appearance

taxpayer could get his bread at a fair and not fictitious price. Under certain conditions the Yerburch committee are in favor of advancing money to farmers guaranteeing to hold against the higher prices; but, on the other hand, the possibility of a farmer sending his wheat to a granary to store for a certain period, he getting an advance on the same, would be most helpful to agriculture as a whole.

"Another reason to be dealt with, that of the 'staff of life' being more nutritious if the wheat has been stored for a year, is most important, especially as, during the past few years, the severe competition between home millers, American and French millers has resulted in the addition of material in some cases quite foreign to what is found in the wheat berry. If by any means the quantity of wheat grown in the United Kingdom was increased the bread sold by the bakers would be of a better flavor, and contain less starchy matter. The following table clearly shows the difference that occurs in the same English wheat made into flour. One sample was ground as received from the farmer soon after harvest, and the other in condition.

	Wheat Not Stored.	Conditioned Wheat.
Sugar.....	2.61 per cent.	2.59 per cent.
Soluble extracts.....	5.48	4.86
Total albuminoids.....	12.00	11.06
Soluble albuminoids.....	1.00	.40

"Thus it will be at once seen that the conditioned wheat is increased in milling and baking value above the wheat ground as it is received from the farmer in the early autumn, by reason of its having less soluble albumen to hinder fermentation in the process of being made into bread, and more sugar

ers, therefore, have much to gain by the establishment of government granaries."

The "Yearbook" of the United States Department of Agriculture for 1897 is a stout volume of nearly 800 pages. The eminently practical turn of Secretary Wilson's mind is reflected in the general utilitarian character of the book. There is not a page which the intelligent farmer can afford to omit. Senators and Congressmen have at their disposal most of the edition. It will pay any reader of the Kansas Farmer to write to one of the Senators from his State or to the Congressman from his district, asking for a copy.

The "Fortieth Annual Report of the State Horticultural Society of Missouri" is a volume of about 400 pages filled with information which it is handy to have around. The Missouri society is an exceedingly practical one and its reports are among the most valuable published.

DEAD SHOT for HOG CHOLERA is guaranteed to cure and prevent cholera in hogs or fowls. Never fails. 25 and 50 cents per bottle, by all dealers, or the Cannon Chemical Co., St. Louis, Mo., wholesale agents.

"Dear me!" exclaimed the girl with pensive brown eyes and ink on her fingers. "I wish I had entered school a year sooner." "What is the matter, dear?" "Things are in so unsettled a state that I scarcely know what advice to give my country in my graduation essay."

Rock Salt for Stock.—Use Kansas Rock Salt for stock. Best and cheapest way of salting your stock.

The Stock Interest.

SOME FOLLIES IN THE CATTLE TRADE.

In a pointed editorial, the Breeder's Gazette says:

"It is one of the unexplained mysteries of the beef cattle trade that those who are supposed to represent the extreme practical side of the business, to-wit, the rangemen and buyers at the yards, should be responsible for a state of affairs which militates actively and directly against the highest development of leading types for actual feed-lot and slaughtering purposes. The very element that plumes itself most upon its intensely practical way of doing business is as a matter of fact the most demoralizing factor we have to-day in the work of improving the quality of our steers.

"For instance: during the recent period of extraordinary activity in the market for Hereford bulls it was developed that many Southwestern rangemen do not want cattle with any red markings about the eyes. From time immemorial Hereford breeders have possessed these so-called brown-eyed cattle, and the idea that any person would ever object to them probably never entered the mind of any man with brains enough to breed good cattle. On the contrary, one of America's greatest feeders, breeders and showmen said to the writer many years ago that he loved his brown-eyed Herefords, and other things being equal, always picked a show calf with the red circle about the eyes. Just what the connection is between this point and every-day service upon farm or range the Gazette has yet to learn.

"Again: these same enterprising buyers have also manifested a disinclination to buy bulls having red instead of white crests. Now our best Hereford herds all contain fine cattle carrying red instead of white hair along the top of the neck. To illustrate how this silly whim unfavorably affects the business we may recall a case in point. At Sunny Slope one day last fall an Oklahoma breeder was in quest of a bull. He was judge enough to locate the best bull in the bunch from which a selection was to be made and said at once: 'I would that calf, but he has no white on crest.' The writer inquired what disservice that made, and the reply was: 'Why, if I were to take that calf down into my country my neighbors would all raise the point that he was not a pure-bred Hereford. I know better myself, of course, but I can't overlook the opinions of the other fellows.' The calf in question was easily the widest-backed, shortest-legged one in the lot. He was left behind, however, and one of less merit for practical purposes, but with white on his neck, was taken instead for steer-breeding purposes. The best one was sacrificed to the acknowledged ignorance of the buyer's neighbors! A pretty state of affairs, indeed, but one which exists in more than one section of the 'practical' West. This prejudice against red-necked cattle seems to affect nearly all the range buyers, and if continued will lead to certain deterioration among our Hereford herds. It is hard enough in all conscience to get high-class herd-headers even when the whole breed may be picked, but if we must draw the line against all the brown eyes and red necks we by that act exclude from the range of selection a large and excellent body of cattle just as undefiled in their descent as any others in the herd book. It is nonsense. It is suicidal; and the Hereford Association might well spend a little of its fat surplus doing missionary work upon these points throughout the West. Let the people know in some way what constitutes a pure-bred animal of the great grazing breed.

"And while upon this subject let a thirteen-inch gun be fired squarely into the heart of that equally senseless and altogether demoralizing craze for dark-red cattle—either among Herefords or Short-horns. Every well-informed man in the cattle business in this country knows that the golden yellow reds are the mellowest handlers and best feeders; and yet they are turned down even harder than the brown eyes and red necks among the Herefords or the roans among the Short-horns. What supreme 'tommy-rot' for intelligent men to indulge in! The solid-color craze comes in reality from the pre-eminently practical, hard-headed folk at the stock yards. As the Gazette demonstrated by interviews with leading buyers more than a year ago, those who are paid great salaries for their supposed expert knowledge of what is under a bullock's hide, when driven into a corner admit

that they bid a premium every day in the week for solid-colored loads of cattle as compared with steers of identical quality and weight but of mixed colors! That our great slaughterers, who pride themselves upon the perfection of their system as respects economy of operation, should countenance this direct leak in their own wallets is inconceivable; and yet the loss to them is trivial compared with the irreparable damage being wrought to our breeding stocks in the daily sacrifice of choice breeding animals upon the altar of solid color.

"Puck has us down correctly: 'What fools these mortals be.'"

The Bacon Hog Again.

Chas. Lennan, buyer for Armour Packing Co., Chicago, has this to say of the bacon hog:

"1. With regard to its conformation: The pig, like the poet, is born, not made. It should have a lengthy body with larger hams and smaller shoulders than are usually seen on the hogs that come to our Chicago market. A small head set on the body with a light neck, a good, deep side and a back that is not too heavy, complete its frame.

"2. As to breed: The best breeds are Yorkshire, Berkshire, Tamworth and Improved Chester White and all the crosses of these breeds. During my trip through the Province of Ontario for the purpose of finding out all I could learn with regard to the breeding and feeding of pigs for the export bacon trade, I could find no other kind of hogs than the above mentioned and their crosses, and as far as my experience goes I feel sure that the cross of the Tamworth boar and the Yorkshire sow produces a bacon hog that cannot be excelled. The great majority of hogs raised in the West have a large percentage of Poland-China in them, and the light hogs of this breed are too short and chunky to ever make a good bacon pig. We do, however, get some light hogs from Missouri that if properly fed would be as near the right shape as can be made.

"3. Does the difference between the bacon pig and the ordinary hog lie in the breed or feed? It is necessary to have breed and feed to make good bacon pigs. Bacon pigs have been bred for years past to have a larger percentage of lean meat in the carcass than the average hog—a fact that may be seen at once when the side of meat is cut.

"4. Will corn make the desired quality of bacon when fed to any sort of swine? Most undoubtedly, no. Corn contains a far greater proportion of oil than other small grains, which the hog assimilates more rapidly than any other animal, and the fat so produced is far softer and contains more oil than the fat of a hog fed in the proper manner to produce the right kind of bacon.

"5. Will bacon pigs command a premium on the market over the ordinary corn-fed type sufficient to justify farmers in growing them? That is a very difficult question to give an answer to. There is absolutely no means of knowing how a hog has been fed while he is alive; the only test is when he is killed and chilled. There is as much difference between the fat of a good bacon hog and that of one fed on corn as there is between the fat of a corn-fed hog and that of a long-nosed Texas hog fed on mast. There is no doubt in my mind that if our packers could have any guarantee that hogs were fed in the proper manner they would be willing to pay a premium for them. The best bacon hogs in Canada, Denmark and the British Isles are fed in connection with dairy farming, and if that branch of hog-raising is to be tried in the United States it must be in conjunction with the dairy industry to become successful."

Annual Meeting of the National Association of Expert Judges on Swine.

This meeting will be held this year in connection with the meeting of the Iowa State Swine Breeders' Association, at Des Moines, Iowa, June 15, with headquarters at the Kirkwood hotel. The Homestead, pursuant to its usual liberal custom toward the swine breeders, has again tendered its fine, large tent for their use for the purpose of scoring swine; also a fine banquet. A number of subjects are expected to be on hand for score practice, and we anticipate a more interesting meeting than usual. Everything indicates now that the meeting will be large and interesting. The 14th will be the date of the Iowa State meeting, and Secretary Prine has prepared a very liberal program of interesting subjects for discussion, and able parties will prepare some papers on topics of interest to all swine breeders. The question of express rates will undoubtedly be discussed at some length,

as the express companies have rescinded somewhat from their position taken at the meeting of the representatives of the State Swine Breeders in September, 1896, and are again compelling the resigning of releases, a thing we understood they were to obliterate on and after September 15, 1896. We hope there will be a liberal turn-out of all who have had grievances against express companies, either by being compelled to sign these releases, or refusal to route their business by any route that they might direct. Inasmuch as no progress can be made in this direction except by concerted action, we trust the swine breeders generally will come and discuss this matter, and if needs be contribute a little here and there to make a test case in the courts.

By order of the Secretary.

W. M. LAMBING.

West Liberty, Iowa.

Sheep Department.

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

Sheep Talk.

A commission firm in St. Louis writes me that H. S. Kirkpatrick's wool topped the market, at 17 cents, lately. About a month earlier my own wool topped the market there at 15 cents. As I have always bought my rams of Brother Kirkpatrick, it will be seen that blood will tell, even in the wool; and perhaps this accounts for the statement Mr. King made that the ram was three-fourths of the flock. I had never regarded him in this way, but I think it is true.

One of our articles in this department has found its way into print in the Wool Record and Textile News, of New York city, and the assistant manager of the New York Wool Exchange, Mr. James McGuirk, writes me as follows: "We are getting up standard grades of all the different States to represent our grading and to be on exhibition on the trading floor of the Wool Exchange. We are short of all grades of wool from Kansas, and if you will send us about twenty-five pounds representing your clip as it runs, we can make the grades that are required, and we will pay you for your wool or any other expense that may occur." I think Kansas ought to be well represented with all grades of wool, and as I have sold all of mine, I cannot send any. I hope some growers of coarse, fine and medium wool will send samples at once and see that our State is well represented with a good article of wool.

Foot-rot in Sheep.

The present season promises to be a wet one and more favorable for the development of foot-rot than drier seasons. Prof. G. T. Brown, a prominent English authority, writes of foot-rot that it is a contagious disease of the foot of the sheep, communicated to healthy sheep by association with diseased sheep, and also by feeding on grounds contaminated with the virus of the disease. Sheep after being infected may not show any signs of the disease in their feet for from ten to twenty days. Newly-purchased sheep with perfectly sound feet cannot, therefore, be considered safe until the expiration of at least a month. Foot-rot begins on the skin above and between the claws. The skin is slightly reddened and covered with white granulated matter or small warty growths. The disease proceeds downward on the inner side of the horn of one claw, and, as a rule, one or two feet only are attacked; very rarely are all four feet affected at the same time. For treatment of foot-rot, all the sheep in an infected flock should be carefully examined. Loose and decayed horn should be carefully and completely removed without wounding the sensitive parts or cutting away any of the healthy horn. It is, however, most important to get to the bottom of the diseased parts. Caustic dressings may be applied by pouring or dropping—not by means of a brush or feather, which soon becomes covered with virus—and the foot should afterwards be protected by a coating of tar. Most shepherds have some favorite remedy, but butyr of antimony, chloride of zinc, or pure carbolic acid, applied lightly to the diseased parts, are usually effectual. A powder of acetate of copper or red oxide of mercury, ten parts of either mixed with forty parts of powdered sugar or made into an ointment with sixty parts of vaseline, may be used instead of the liquid dressing.

When the disease exists in a large number of sheep they may be driven through a trough containing a solution of carbolic acid, one part to thirty or fifty parts of soap and water, accord-

Swollen Neck

Also Had Great Difficulty With Her Heart—How Cured.

"My daughter had a swollen neck and also heart trouble. After the least exertion she would breathe so hard she could be heard all over the room. She could not sweep the floor or even move her arms without affecting her heart. Her limbs were badly bloated. Her father insisted that she must take Hood's Sarsaparilla, and we gave her about six bottles, when she was cured, and there has been no return of her ailments." MRS. EMMA THOMAS, North Solon, Ohio.

Hood's Sarsaparilla

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

Hood's Pills easy to buy, easy to take easy to operate. 25c.

ing to the severity of the disease; or, instead, the sheep may be turned into a shed, the floor of which is covered with quicklime reduced to a coarse powder. But this rough treatment is not so effectual as the other method, which includes a careful preparation of the diseased foot before any remedies are applied. Dressing must be repeated two or three times a week. Wet land, although it does not produce foot-rot, is very favorable to its continued existence; if possible, therefore, sheep, while under treatment, should be kept on dry ground. Land on which sheep with foot-rot have been kept is certainly dangerous for some time, how long has not yet been ascertained—probably for some months, especially during wet weather or where soil is moist. Sheep cannot be infected with foot-rot if they are bred and kept on an uncontaminated farm from which all sheep from without are excluded. But, generally, these conditions cannot be secured or maintained, and, instead, the adoption of a system of quarantine of a month, or as long as circumstances will permit, for all newly-purchased sheep, before they are allowed to associate with the rest of the flock, will afford a reasonable amount of security without materially altering the customary course of sheep farming. The exercise of ordinary caution in the purchase and sale of sheep would have an immediate effect in arresting the spread of the disease, which is chiefly due to the contamination of highways, pastures, railway trucks, fairs, sale yards and markets by diseased sheep, which are constantly being moved about the country without regard to the serious consequences which naturally result. Complete isolation of all diseased or even suspected sheep should, if possible, be insisted on, and sheep which have recovered from the disease should not be returned to the flock until a long period of separation has proved that no return of the disease is to be apprehended.

DIP YOUR SHEEP with Cannon's Sheep Dip (liquid and non-poisonous), easiest to use, cheapest and best made. Cures scab, kills ticks, lice, fleas and maggots. Used by the largest and best breeders. Satisfaction guaranteed. Write to the Cannon Chemical Co., St. Louis, Mo., wholesale agents, for circulars and prices.

Every dead bird means many more live insects. Choose ye which it shall be.

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. Price, 25-pound pail, \$3.50; 5-pound can, \$1. Address Bannerman & Co., Chicago, Ill.

Importance of Scales on a Farm.—Every instrument or tool which time has demonstrated saves a business man or farmer money ought to be added to his outfit just as soon as he can afford it. This is strictly so regarding scales. No farmer can afford to send a load of wheat, corn or potatoes, a drove of cattle or even a jar of butter to market without first knowing how many pounds he has to sell. Instances are without number where farmers would have saved the price of a wagon scale in one day by knowing whether to sell by the bushel in weight or bushel in measure. The day for high prices in scales is past, as any reader can demonstrate by addressing the Osgood Scale Co., Binghamton, N. Y., whose advertisement appears in this issue.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending June 6, 1898, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

A fine growing week, being much warmer, with less rainfall. The rains were heaviest in the central counties of the western division and in Doniphan, and lightest in the extreme southeastern counties. Hail storms occurred in Sedgwick and the contiguous counties, and in Franklin, Riley, Atchison and Brown.

RESULTS.

EASTERN DIVISION.

The delayed corn planting is now well-nigh completed, the late planting coming up with a good stand, and the weeds being rapidly destroyed. Wheat is generally headed and much of it blooming; it is ripening in the extreme south, and in Wyandotte the early-sown grain is fully formed; wheat has rusted some in Montgomery, Wilson, Chase, Jefferson, Brown and Doniphan. Alfalfa cutting has begun as far north as Pottawatomie and Wyandotte.

Allen county.—Fine week; wheat turning; chinch bugs destroying oats; corn all planted, coming up nicely, but is weedy; cherries, strawberries and mulberries ripe.

Anderson.—Favorable week; corn planting and cultivation rushed.

Atchison.—Corn one-half planted; fruit still falling; chinch bugs numerous.

Bourbon.—Corn planting nearing completion; wheat and flax looking well; oats promise well, though chinch bugs are numerous.

Brown.—Corn cultivation begun; wheat headed, some rust; oats look well; wheat fields destroyed by hail be-

Labette.—Needing rain; wheat nearly ready to cut; corn where clean doing well; clover cutting begun; cherries a failure.

Leavenworth.—Favorable for work; corn all planted, and what is up is growing rapidly.

Marshall.—Good growing weather and all crops growing rapidly; tame grass ready to cut next week; corn generally a good stand; clover extra.

Montgomery.—Good corn week, cultivation not interrupted; too warm for best results to wheat; some complaint of rust and chinch bugs.

Morris.—Good growing weather; bugs damaging wheat and oats; potatoes promise a good crop.

Neosho.—Favorable week for work and crops; wheat looks very well; tame grass fine; cherries and berries excellent; prospects for a large peach crop.

Osage.—Favorable for all crops; corn about all planted, replanted corn coming up; cultivators at work; apples will make a short crop.

Pottawatomie.—Corn replanting done, cultivation begun, corn looking well; wheat prospects never better; oats looking well; strawberries plenty; cherries beginning to ripen; alfalfa haying begun, heavy crop; pastures good.

Riley.—Warm, sunshiny week, favorable to fruits and farm crops; home strawberries plentiful.

Shawnee.—Good week on crops, everything growing rapidly; wheat nearly all headed, coming into bloom; oats showing a few heads; corn planting and replanting nearly finished, corn growing nicely; fruit all right; chinch bugs numerous.

Wilson.—Wheat rusted some; corn doing finely; oats beginning to head; fruit dropping some.

Woodson.—Good farming week; corn

cultivated once and is doing very well; some wheat rusting; wheat, oats and grass very good.

Kingman.—Wheat and oats all headed in southern part; some red rust on wheat; corn backward, but doing well; hail did some damage in streaks.

McPherson.—Wheat filling finely; oats looking better; corn being worked; alfalfa cutting progressing; new potatoes on market; peaches promise abundantly; rye is prime.

Mitchell.—All crops in fine condition, save a few pieces of wheat where rust has appeared.

Pawnee.—Rye in bloom; wheat, early oats and barley heading; corn doing well; grass never better at this season; chinch bugs plentiful.

Reno.—Corn being cultivated; wheat fine; oats heading, but a short crop; alfalfa in bloom and some being cut; early cherries ripening; new potatoes on the market.

Republic.—A fine growing week; wheat heading.

Rush.—Wheat heading, prospects good for a large yield; early potatoes promise abundant crops; pastures unsurpassed; weather more favorable for corn.

Russell.—Corn cultivating well begun, corn a good stand; fruit doing well; wheat extra well; everything growing rapidly.

Saline.—A growing week for corn; wheat in full bloom, some complaint of red rust; alfalfa ready to cut; early potatoes on market.

Sedgwick.—Wheat in fine condition, except where it has rusted; cherries are ripe; corn getting weedy, but generally a good stand; apple prospect poor, peaches fair.

Stafford.—Corn being cultivated; wheat all headed; all crops best for years.

Sumner.—Wet weather hurting wheat and corn; corn small and weedy; wheat in all stages from just shooting to half filled; but little damage by hail.

Washington.—Everything is growing finely; wheat filling, but some red rust in it; wheat and oats growing much straw; oats beginning to head; corn growing well, but late.

WESTERN DIVISION.

Fine growing weather. Crops have made good progress. Wheat is heading in the south, and beginning to head in the northern counties; wheat with thin stand is very weedy; other fall wheat, with spring wheat, oats, barley, alfalfa and grass are in prime condition. Alfalfa is being cut in the southern counties, showing a crop of fine hay. Sedgwick has this division, as a whole, been in better crop condition.

Clark.—Good growing weather; wheat and barley heading.

Finney.—All vegetation growing rapidly; alfalfa being cut; fruit badly damaged by hail; wheat making fine growth.

Ford.—Wheat, finest ever grown here; alfalfa being cut, most too rank, some hay injured by showers; prospects never better for all crops in this county.

Gove.—Fine growing week; corn being cultivated.

Gray.—Wheat heading and is fine; corn never looked better, nor did barley; cherries falling; small fruit fine.

Greeley.—Fair growing week.

Hamilton.—Much rain, making everything grow; good prospects for good crops of wheat, rye, oats, alfalfa—everything except fruit.

Kearny.—Alfalfa being cut; corn and seed watermelons a poor stand; wheat, oats and rye doing well.

Logan.—Ground in better condition than since 1885; splendid growing weather; early wheat headed, with fine prospects; early barley and oats heading in No. 1 condition.

Morton.—A week of growing weather; forage crop planting being pushed.

Ness.—Growing week; barley heading, acreage immense; thin wheat fields weedy, others splendid; corn doing finely and being cultivated; potatoes and grass never looked better; stock in fine condition.

Rawlins.—Crops growing finely; never saw better prospects, although some fall wheat failed to show up.

Scott.—Growing week; weeds will take the thin wheat; oats, barley and spring wheat making magnificent growth.

Sherman.—All crops growing rapidly; winter wheat and rye heading nicely; spring wheat, oats and barley finest in the history of the county at this season.

Thomas.—Everything growing fine; some wheat heading; ground thoroughly soaked.

Trego.—Wheat jointing, some heading; barley good; corn late, growing rapidly; pastures good.

It is claimed that persimmons are good to fatten hogs. The persimmon is a pretty good fruit.



It is undoubtedly a fact that our grandmothers, the pioneer women of the country, led more laborious lives than the housewives of to-day. In spite of this fact, they bore their husbands healthy, robust sons and daughters, and did not become weak, complaining invalids as a consequence.

There are probably several reasons for this. One is, that they lived more in the open air, and another, and probably the most influential of all, is that they were less prudish than the women of to-day. They were not ashamed to know something of their own physical make-up. They were not too nice to take care of their health in a womanly way. Women now-a-days suffer untold tortures in silence, because of weakness and disease of the distinctly feminine organism, rather than consult a physician, or even talk upon the subject to their own husbands. They imagine that troubles of this description can only be cured by undergoing the disgusting examinations and local treatment insisted upon by the average modern physician. Doctor Pierce's Favorite Prescription cures all diseases peculiar to women in the privacy of their own homes. It does away with the necessity for examinations and local treatment. It acts directly on the important organs concerned, making them strong, healthy and vigorous. It fits for wifehood and the burdens of household duties. It allays inflammation, heals ulceration and soothes pain. It tones and builds up the nerves. It banishes the discomforts of the time of expectancy and makes baby's advent easy and almost painless. Thousands have testified to its merits.

Over 1000 pages of medical advice free. Send 21 one-cent stamps, to cover mailing only, for paper-covered copy of Dr. Pierce's Common Sense Medical Adviser. Cloth bound 31 stamps. Address Dr. R. V. Pierce, Buffalo, N. Y.

Gossip About Stock.

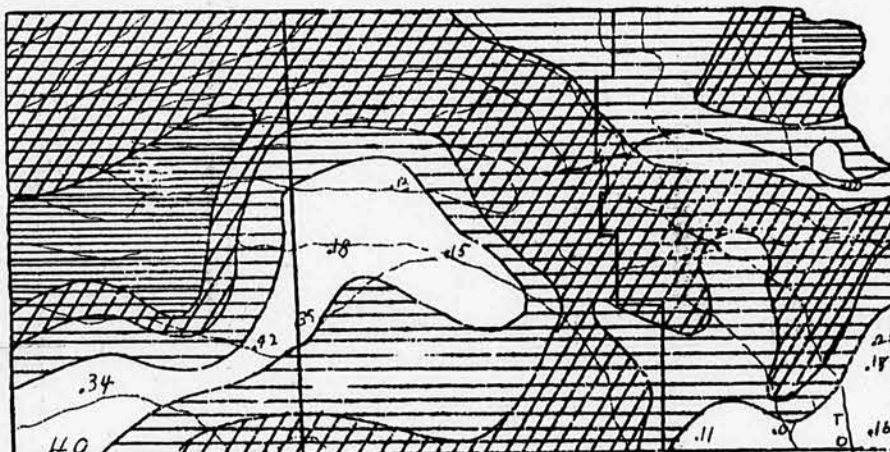
One of the "top" loads of hogs sold at Kansas City last week, says the Drovers' Telegram, was marketed by J. W. Secrest, of Randolph, Kas., who has raised and fed them. The hogs averaged 333 pounds and were sold to the Armour Packing Company at \$4.35 and was one of the three loads that brought that figure. Mr. Secrest is a graduate of the State Agricultural College, at Manhattan, Kas., and has put his college learning into practical use and is one of the most successful farmers in his neighborhood.

Note the Stock Fountain Company advertisement on page 16. Every farmer should have one of their fountains to furnish a supply of clean, pure, fresh water to the hogs, thereby preventing cholera later on. It is now acknowledged by all that the greater part of the cholera and other diseases of hogs are caused by drinking impure water from running creeks, mud-holes and dirty troughs. Commence early to give plenty of pure water and prevent disease. They send the fountain on trial, express prepaid, to be remitted for when satisfactory. The fountain will pay for itself in a week in saving of water, labor and the additional weight to the hogs.

Short-horn Breeders' Headquarters.—During the past few days a Farmer representative visited what is perhaps the most extensive Short-horn center in Kansas for representative herds of this breed. The location of these herds is in northern Osage county, western Shawnee county and eastern Wabaunsee county. The headquarters of Short-horns are all in easy driving reach of each other and comprise the following breeding establishments: Peter Sims' Sons, Wakarusa; Andrew Pringle, Harveyville; Thos. P. Babst and T. K. Tomson & Sons, and F. C. Kingsley, Dover, and E. L. Knapp, Maple Hill, Kas. The herds of Tomson & Sons, Babst and Pringle are the larger and more representative and include Short-horns good enough to go anywhere. In subsequent issues the Farmer will give more details concerning the individual herds.

C. E. Hill & Co., of Kansas City, are well equipped, as will be seen by their advertisement, to supply all kinds of dairy supplies, boilers, engines, etc. Any of our readers needing a reliable hand separator should write them for information regarding the Empire cream separators, for which they are exclusive Western agents.

The garden may not be a "mortgage lifter," but it contributes largely to the health and strength necessary to the successful lifting of that critter.



Scale less in inches 4
ACTUAL RAINFALL FOR WEEK ENDING JUNE 4, 1898.

ing planted to corn; strawberries on market.

Chase.—Wheat filling in spite of rust and promises good yield; alfalfa, best for years, being cut for hay; corn cultivation pushed; fruit not dropping; early cherries ripening.

Chautauqua.—Good week for work; alfalfa being cut; wheat ripening; corn clean and growing fast.

Cherokee.—Corn growing very fast; wheat, oats and flax O. K.; new hay on market; early cherries a fair crop, late a failure, other fruit light.

Coffey.—Late-planted corn coming up, an even stand; some corn yet to plant; rye in southeast part falling; oats and flax doing well; millet, cane and Kaffir going in.

Doniphan.—Winter wheat so rank it is lodging, most fields in northeast part show rust; ground being plowed; corn being replanted; cherries and plums falling; berries will be abundant.

Douglas.—Planting done except where too wet; wheat doing well; oats not so good; fruit still falling badly; corn weedy.

Elk.—Good week for work; early cherries ripe; new potatoes on market.

Franklin.—Wheat, oats, flax and grass doing well; some corn yet to plant; corn that is up looks fine, but needs cultivation.

Greenwood.—Wheat headed; corn small, but doing well and is being cultivated; grass especially fine; large acreage of Kaffir corn going in; cattle gaining rapidly.

Jefferson.—Corn planting nearly finished; rust on wheat in north part; vegetation growing rapidly.

Johnson.—Ground too wet to work and drying slowly; 75 per cent. of corn planted, poor stand on low ground; wheat drowned out in spots; oats thin; flax looks fairly well; potatoes badly drowned out; apples and plums falling badly.

growing finely; wheat very fine, beginning to turn; flax in bloom; alfalfa being cut; hay crop will be fine.

Wyandotte.—The grain in the early wheat is fully formed; alfalfa cutting has begun; corn planting nearly finished; everything growing rapidly.

MIDDLE DIVISION.

A fine growing week. Corn is making good progress and is being cultivated. Wheat is headed and generally is filling well, but the red rust is reported from several counties. Alfalfa is ready to cut, and many are cutting; some have about finished; the hay is appearing on the market and is very good. Cherries are ripe in the southern counties, and early potatoes are coming to market. Some damage by hail.

Barber.—Splendid growing week; wheat nicely headed; oats in fair condition; replanting of corn, cane and Kaffir continues; growing corn and forage crops doing finely; alfalfa ready to cut.

Barton.—Barley heading; oats doing well; corn cultivating begun; alfalfa cut for hay; new potatoes on the market; plenty of grass, and cattle doing finely.

Butler.—Corn doing fairly well; some rust on wheat; hail damaged fruit, gardens and small area of wheat.

Cloud.—Wheat very heavy and rank, some few fields spotted with rust; fruit promises well.

Cowley.—The best growing week of the season; corn doing finely; oats heading and looking well; wheat ripening in good shape.

Dickinson.—Wheat headed and well filled; corn backward.

Edwards.—Favorable for all crops; about 20 per cent. of the wheat too weedy to cut; oats and barley doing finely; cherries dropping badly, other fruits doing well.

Harvey.—Nearly all the corn has been

The Apiary.

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

Losing the Queens.

Editor of the Apiary:—I have three hives of Italian bees, and have set out a few nuclei for the purpose of raising some queens. I succeed in getting the queens hatched out and the nuclei supplied all right, but my queens do not begin to lay, and most of them become lost in some way. Can you tell me the cause?

AMATEUR.

Perhaps the cause of the failure of your young queens not becoming fertile is the absence of drones. If your hives contain no drones, and there are no other bees or drones in the neighborhood about you, your young queens will surely fail just in the way you say. If the combs in your hives are all built on worker foundation, and have been carefully supplied and fitted up with this, I would be of the opinion that you have no drones. On the other hand, if your bees have made their own comb, and foundation not used at all, then I should judge that they are not lacking in drones; and I think that if you keep at it you will succeed.

Carbolic Acid Instead of Smoke.

Editor of the Apiary:—Seeing the apiary department in the Kansas Farmer, I write to suggest that you can try a very simple, easy way of driving bees. I used to handle them and found it quite an improvement on smoke, especially when visitors, and very often ladies, wanted to see the operations of bees, or when a slight examination was required. Put one ounce of pure liquid carbolic acid into a bottle with one pint of water; shake occasionally; the acid being oily, will not dissolve (unless some glycerine, I believe, is added), but separate into globules, and after being together say about a week to impregnate the water with its odor of carbolic acid, it is ready for use. Take a sponge or piece of rag and wet it with the mixture, and squeeze out dry, and go to the hive, lift off the top quietly—improved frame hive, of course—and turn the corner of the quilt back and draw the ge across the bees, and the bees as soon as they get a sniff of it, tail and trot off away down their combs. This does not excite them as smoke does, and for a slight glimpse it is much more convenient than smoke. If you try it and succeed as well as I have, you will find it a valuable aid.

Kingman, Kas.

ED. A. LORD.

Excessive Swarming.

Excessive swarming is always the result of a good honey season if the bees are allowed the privilege of running things to suit themselves. Bees should not be allowed to swarm more than once to each colony, and after the first swarm comes off the queen cells should all be removed from the parent hive except one, which should be left to supply the hive with a queen.

The first swarm that issues from the hive is a profitable one, as it contains the old queen, and she being a laying queen, is ready to lay eggs and brood rearing begins as soon as they are hived and have some comb to commence work on. All after swarms that issue contain young, unfertile queens, and will not be ready to lay for a week or more after being hived even if successful of fertilization, and as a large per cent. fall or in some way become lost, such swarms are very uncertain of any value. After swarms also weaken the parent stock to such an extent that they often prove of but little value. Excessive swarming will also result in no surplus honey, and very frequently in not having a sufficient amount of stores to live on.

First swarms often fill up their hive in a short time and swarm again; these are the same as other first swarms and contain the old queen, being her second time of swarming in the same season. She leaves her hive in the same condition as the one she formerly left, having queen cells, and second swarms may issue if the cells are left to mature. The amount of storage room given a colony has much to do in governing swarms, and if the bees are kept confined in the brood chamber of hive exclusively they will swarm more readily than if they have unlimited room to store honey. Some races of bees are more inclined to swarm than others, and even some colonies of the same race are also more inclined to swarm than other colonies. The Italian bees swarm more than the native black bees, and still other varieties are more persistent in this re-

spect. The Cyprian bees are inveterate swarmers, and will frequently swarm with scarcely any honey in the hive, and in one instance I had them to swarm a first or prime swarm when the swarm took every drop of honey with it that the hive contained. The Cyprians are very prolific breeders, and will produce double the number of young queens that other varieties do at swarming time.

Bee Notes.

A swarm may cluster on a limb after issuing and stay there all day, but it is likely to get up and go in about half an hour or even less, so the safe plan is to hive it at once.

Very frequently the queen accompanies a swarm from the hive but is unable to take wing on account of bad wings, and the swarm will again return to the hive. In every such case a search should be made for the queen, and in most cases she will be found on the grass with a little ball of bees around her.

It is cruel to hive a swarm of bees in an old soap box, or any other empty box, and no one should expect any good from them thus treated. Give them a full set of frames filled with foundation in a good movable frame hive and they will soon pay you for all the expense. If you once try this you will not hesitate afterward to make the investment.

If you are near alfalfa do not fail to invest in bees. A colony of bees will pay for itself two or three times over in one season if attended to and given room to store honey. There are a vast number of localities that may be profitably stocked with bees and tons of the most valuable sweets obtained that would otherwise go to loss, and no damage of any kind would result, but, instead, a benefit to all seed-bearing plants.

Bees when gathering honey are very gentle and may be easily handled. This is especially so with swarms, and it is only in extreme cases that they attempt to sting. Swarms always leave the hive with as much honey as they can carry with them, and their being full of honey accounts for their gentleness. Persons who understand bees thoroughly have no fear of stings whatever, and will work with them at any and all times and under all conditions with safety. Unless the swarm is an extremely large one it should be confined in the brood department for a few days before adding upper stories. The brood nest is thus located where it ought to be, and will not interfere with the surplus department. If a swarm is hived in a two-story hive the bees will go to the top to begin work, hence the importance of using the brood chamber proper at first, and afterwards adding the surplus boxes. A good-sized swarm when hived on a set of frames filled with foundation will be ready for the surplus boxes in three or four days.

Shawnee Horticulturists.

The Shawnee County Horticultural Society met Thursday, June 2, at the beautiful residence of L. R. Taylor, overlooking the Kaw valley at the east end of Calhoun bluffs, and had a fairly well-attended meeting with a basket lunch upon the lawn. Strawberries, early cherries and gooseberries were in great abundance. Many roses, peonies and other flowers were furnished by Mrs. Taylor, Mrs. Cecil, Mrs. Kleinhans, Mrs. Kelsey and other ladies.

Mrs. J. F. Cecil, Vice President, presided, in the absence of President Smith. In the afternoon the program was carried out in a session on the lawn.

Mr. A. L. Brooke, nurseryman, of North Topeka, being first on the program, was called upon to tell "How the planter could distinguish good trees from bad." Mr. Brooke, among other things, said that nurserymen had been very watchful in order to avoid selling trees that had aphids, or borer, or knot. Many trees were burned because they were supposed to be infected with aphids; but now, that the prices of trees had gone up, look out for yourself when you buy trees, because nurserymen do not like to burn a high-priced tree. A good nurseryman can know his scions just as well as you can the fruit when it comes on your table, and can have his grafts true to name.

"I have been planting apple stocks for budding, shortening the roots and cutting off the tops; but I never had a good stand. Last year I cut down the roots until I could plant them with a dibble; but cut off none of the top, and about 90 per cent. grew. I did the same this year, and about 99 per cent. grew. I want no whole roots. I would as soon have a sectionized root. We cannot nurse two crops of trees from the same ground. We may raise a magnificent crop of trees on a piece of ground, and if our trees become destroyed and we plant

a new crop of trees we may have a great failure. Why? Well, I don't know, unless the first crop of trees had already exhausted the soil for apple. One man had an orchard destroyed by hail. He cut his trees back and had a fine crop of scions for his neighbors and himself. If he had cut his trees out and planted a new crop of trees he would have had very few good scions. We prepared many stocks of pears, grafting with Kieffer. We kept first cut and second cut separate and planted them separate. Now, if we didn't know which was which, we never could tell which was first cut and which second cut. Both are equally thrifty and better than our grafts that were put upon whole roots. I heard of a man at Leavenworth who had great success with his grafts last year by putting them in cold storage during the previous winter. I placed several hundred thousand grafts in cold storage last winter. In the spring I sent my wagons after them and found them all rotten."

Mr. Cecil said: "People are asking the nurserymen what trees are good to plant. It is like the farmer, said to be the most independent man on earth, who goes to town and asks the commission man what he will give for his crop; he also asks the merchant what he will take for his tea and sugar; thus taking what the merchant will give for his produce and giving what the merchant asks for his purchases. Thus we ask the nurseryman what is best for us to plant, forgetting that the nurseryman is most likely to recommend the trees he has and that are most profitable to him. Reliable nurserymen, however, raise the trees that are most profitable to the fruit-grower and best adapted to the climate."

Judge Wellhouse said: "An apple tree, like a mule, will stand more abuse than any other tree. You may cut the roots of a graft or a young tree nearly all off and still the tree will grow. My best success in raising trees from grafts has been with cut roots. I have found that nurserymen who sell trees to their neighbors are among the honestest men I know of. Peddlers who buy from our nurserymen and take the trees away to sell to people they may never see again are among the most dishonest I ever met. Our best success in raising apples has been where we planted our grafts deep enough so that the scions have a chance to cast root above the union of the graft."

Mr. Lux did not believe excessive root-pruning was good for the tree. The tree ought to have root in proportion to the amount of its top.

Mr. T. B. Jennings, the United States Weather Observer from Topeka, being present, was called upon to give some explanation of the weather. He explained the modus operandi of the progress of what is called a "low" barometer across the country, drawing toward it the surface currents from all directions. "A hot wind indicates that the center of a 'low' is far to the north of us. As the 'low' approaches from the northwest, the chances of rain increase. Tornadoes, improperly called cyclones, form on the southeast side of a 'low' and usually travel east or northeast. To escape from a tornado, if you see a funnel cloud approaching from the southwest, you should run southeast; if you retire to the cellar the southwest corner is the safest place. Unstable equilibrium in the atmosphere usually occurs from a quarter of a mile to a mile above the ground. The government is now experimenting with kites, studying especially that stratum of the atmosphere in order to improve the efficiency of the forecasts. They send up with the kite what is called a meteorograph. This consists, first, of an aneroid barometer, thermometer and hygrometer, each recording upon a sheet of paper wound on a cylinder run by clock-work. The whole instrument weighs about two and one-half pounds and costs about \$150. Every few minutes a check is made from the ground, indicating the exact height of the instruments at the time."

On motion of Mr. Lux a vote of thanks was extended to Mr. and Mrs. Taylor for the very pleasant entertainment.

Society adjourned to meet at Mr. Garlinghouse's, in Highland Park, on Thursday, July 7.

Some one has fittingly said: "As the strength of a chain is governed by its weakest link, so the quality of creamery butter is governed by the dirtiest milk sent to the vat." It is admitted that the most serious drawback to the creamery is that it matters not how skillful or how careful the factory manager may be, he is at the mercy of the laziest, dirtiest and most careless of his patrons.

Planting a tree as you would a post postpones the coming of fruit many a long day.

The British Bacon Market.

Yearbook of the Department of Agriculture.

To supply the present demand of the British market requires the importation of more than 500,000,000 pounds of bacon a year. This bacon is procured almost entirely from three countries, the United States, Denmark and Canada. Although the United States is still the chief source of supply, the quantity purchased from this country is decidedly smaller than it was five or six years ago. On the other hand, the British have greatly increased their importations of Danish and Canadian bacon. An inquiry into the reason for this change in the course of trade discloses the fact that our bacon is not so well adapted to the requirements of the British market as is that imported from Denmark and Canada. The article produced in the United States is chiefly corn-fed bacon, and although regarded with high favor in our own markets, it carries altogether too much fat to suit the taste of the English consumer. Denmark and Canada furnish a much leaner grade of bacon. Their producers have studied the peculiar wants of the British market, and with such success that they are already making important inroads upon our trade. The Danish and Canadian brands of bacon are regarded in Great Britain as being so far superior to ours that the price paid for them is several cents a pound higher. As we send annually to the British market more than 300,000,000 pounds of this product, the loss of only a few cents in the price per pound makes an enormous difference in the profits of the trade. It will therefore be to the interest of our producers, in providing bacon for the British trade, to give more attention to the peculiar wants of the people to be supplied, for in this way only can a profitable development of our export business be accomplished.

IMPORTANCE OF STUDYING FOREIGN REQUIREMENTS.

These facts relative to our export trade in bacon show how important it is for our exporters to familiarize themselves with the exact requirements of the markets sought. In the face of the keener competition that is now being waged by the great producing countries, this policy becomes all the more essential. Not only must the goods offered be of the highest grade and quality, but they must also be adapted in every particular of style and flavor to the peculiar taste or fancy of the desired purchaser. Even the nature of the receptacle or covering in which the goods are sold, the size and shape of the package, must be regarded. These minor requirements of the trade differ materially in different countries. The style of package that is popular in one quarter may prove to be a decided disadvantage in another. Only recently our exporters discovered that one of the reasons why American butter did not find a readier sale in England was because it has been the practice to ship it in round tubs, such as are commonly used for packing the article in the United States, whereas the customs of the British market make a square package more desirable. In order to compete successfully in the butter markets of the United Kingdom, therefore, American exporters find it almost as essential to regard this preference for a square package as it is to satisfy the British taste in respect to the color and flavor of the article itself.

Upon the careful observance of such matters of taste and custom as are illustrated by these references to our foreign trade in bacon and butter depends very largely our future success in competing with other nations for the world's markets. In this contest for trade the first requisite is a thorough knowledge of the conditions to be met. To assist in supplying such a knowledge is the object of the Section of Foreign Markets.

A Canadian dairy farmer found out what the Babcock test would do for him. He had twenty-four cows and two hired men. He tested the cows and found that eight of them did not pay for their keep. He disposed of the eight and one hired man. At the end of the year he found he had made as much money as when he had kept the twenty-four cows and two hired men. He reduced his herd still further to twelve first-class animals and from them expects to get as much income as he used to get from the twenty-four.



BEE SUPPLIES.

I have every thing that is needed in the Apiary. Send for CATALOGUE. E. W. DUNHAM. 106 1/2 W. 5th St., Topeka, Kansas

The Home Circle.

BATTLE HYMN OF THE REPUBLIC.

Mine eyes have seen the glory of the coming of the Lord!
He is trampling out the vintage where the grapes of wrath are stored;
He hath loosed the fateful lightning of his terrible, swift sword.
His truth is marching on.

I have seen him in the watchfires of a hundred circling camps,
They have builded him an altar in the evening dews and damps;
I have read his righteous sentence by the dim and flaring lamps.
His day is marching on.

There read a fiery gospel writ in burnished rows of steel:
"As ye deal with my contemners, so with you my grace shall deal!"
Let the hero, born of woman, crush the serpent with his heel,
Since God is marching on.

He has sounded forth the trumpet that shall never call retreat;
He is sifting out the hearts of men before his judgment seat;
O, be swift, my soul, to answer him! be jubilant, my feet!
Our God is marching on.

In the beauty of the lilies Christ was born across the sea,
With a glory in his bosom that transfigures you and me;
As he died to make men holy, let us die to make men free,
While God is marching on.

—Julia Ward Howe, 1861.

AN OLD MAID'S LOVE AFFAIR.

A child crying down in the swamp—what could it mean? Miss Abigail Drew stopped, and set down the heavy basket of lunch she was carrying to the men in the hay field. It surely was a child's cry, and a baby's, too! How it stirred the chords of her lonely, longing heart! Miss Abigail loved children with a passionate yearning of love, and yet it had been years since she had even heard a baby cry. Living alone with her brother and his occasional help, on that remote farm, all social relationships, all neighborly amenities and delights were almost entirely denied her. And above all things she missed and longed for the sunny presence of children. She felt that, if she only had a child to care for, her barren, empty life would overflow with joy and purpose. The days, now so sad and meaningless, would be so rich and blessed then! Ah, there is nothing like the infinite aching of the mother-heart in a childless breast.

Therefore, that child-cry, floating up from the swamp, was heavenly music to the heart of Miss Abigail Drew. She clasped her hands and listened, her whole being absorbed in the associations connected with the sound. Suddenly her heart surged into her throat, and she caught her breath with the thought that rushed across her mind—what if a baby had been left in the swamp deserted! And what if she should be the one to find it and take it home, and oh! what if nobody should ever come to claim it! The wistful face of the woman paled and flushed, and flushed and paled, in swift succession, as her heart brooded upon this wonderful possibility. At length, with a little cry that was all a prayer, she sprang toward the swamp, leaving the basket of lunch under the blaze of the July sun.

When she emerged from the thick, low woods at the bottom of the pasture, her dress was torn and her face scratched and streaming with perspiration, but the rapture and triumph that shone in her eyes, as she looked down upon a bundle strained to her breast, showed that life, for her, had suddenly been lifted above all ordinary conditions and considerations, and that she was only conscious of walking upon such roseate air as the old painters limned beneath the feet of their exalted Madonnas. A little face peeped out from the ragged shawl that wrapped Miss Abigail's precious burden, but the plaintive cry had ceased, and the blue eyes of the little foundling were gazing up into those "two springs of limpid love" that shone above them.

Nathan Drew and his two hired men were waiting impatiently under the shadow of a big elm tree, when their breathless provider finally arrived with the basket of lunch and that strange bundle upon her left arm. It was long past noon, and Nathan Drew was fretting and fuming at his sister's unaccountable delay.

"What in 'tarnal kept you so long?" he demanded, as the panting woman dropped the basket under the shadow of the elm. "And, for goodness' sake, what ye got in yer arms?"

"A baby, Nathan!" replied his sister, in a voice full of soft, reverential joy. "A poor little baby that was left in the swamp. I heard it crying and went to

find it, and that's what made me so late."

"Humph!" said Nathan Drew, taking the covering from the basket and inspecting its contents. "What be ye goin' to do with it?"

A cloud swept across the radiant face of the woman. There was something distinctly forbidding in her brother's tone and manner. Evidently, the only question that had entered his mind was how to get rid of the unwelcome encumbrance that had been left upon his land. Their thoughts were traveling in diametrically opposite directions—the woman's toward retaining the child; the man's toward disposing of it!

There was something of the protective cunning of love in Abigail's evasive answer to her brother. "Probably somebody will come along and claim it in a little while," she said.

Nathan Drew laughed derisively. Then he took a huge bite out of one of Abigail's delicious chicken sandwiches and washed it down with a gulp of coffee from the warm can. "Very likely," he replied at length; "very likely!" Then he laughed again. "Somebody dropped it accidentally in the swamp, eh, boys? Somebody'll be comin' back, 'most crazy to find it, by 'n' by."

The hired men laughed servilely, though it was plain that their minds were chiefly absorbed by the lunch basket which their employer held between his legs, and was steadily plundering.

"Well, come on, boys. Hitch up here and have something to eat!" cried the farmer. "We can't bother about a baby all day. There's work to be done."

The tongues of the hired men were loosed as their anxiety disappeared, and one of them, a swart little French Canadian, exclaimed:

"Ah guess ah know where dat bebbie come from, me! Dat mans leev in lumber shanty on Coon Hill; he gone, an' heez ol' hooman have t'ree, four, five bebbie—prob'ly two. Ah bet dat man's left dat bebbie, seh!"

"I shouldn't wonder," replied Nathan Drew. "Shiftless cuss! Camping down on my property without even asking permission, and using my lumber shanty, stove and wood! I'm glad he's gone, but I wish he'd taken his hull dern brood with him. The young un'll prob'ly grow up jest like the rest of 'em, lazy and wuthless!"

"Ah heard say," continued the little Frenchman, "dat man's Hinglishman, good fambly, but not ver' strong for work. Los' heez health, an' bliged for take to de woods. No money—no health—big fambly. Ah guess ah'll do 'bout same t'ing as him, bah gosh, if ah get too much bebbie!"

"Don't doubt it, Alphonse," rejoined the farmer. "That's jest the sort of a critter you be, and yer hull Canuck tribe."

Alphonse grinned appreciatively and took no offense. Then silence fell upon the three men until the last crumb and drop of their noonday lunch had disappeared.

Abigail tenderly laid the baby down in the grass, while she gathered together the dishes and napkins and repacked them in the basket. Her brother stood over her watching. He was a spare, hard-faced iron-gray man, who showed by every line and feature the absence of sentiment in his make-up. The woman's hands trembled as she worked. She knew he was about to say something concerning the child. Presently he spoke:

"You kin keep that young un jest two days, Abigail. Then, if there don't nobody come to claim it, I am goin' to take it to the Foundling hospital." Having thus delivered himself, he shouldered his pitchfork and walked determinedly away.

Tears obscured the homeward path of the little woman as she struggled through the shimmering sunlight with the infant on her arm. She knew that her brother would be turned from his purpose neither by argument nor by entreaty. He had spoken, and that was an end of it—the inflexible ultimatum of that old Puritan-bred tyranny that survives in so many heads of New England households.

But though the path was blurred, it took her home—the only home she had ever known, the roof under which she had been born and reared and which had descended to her elder brother when their parents died. Hastening to the pantry she took milk and warmed it for the babe, half stupefied by starvation. Then clumsily, yet with a woman's instinct, she sparingly fed the child with a spoon, a few drops at a time. As life came back to the little body with nourishment, the baby cried weakly, and Abigail strained it to her bosom, while tears of mingled joy and pity rained down upon the little head. What a pretty child it was despite suffering!



What a clear, white skin; what blue, blue eyes; what breadth of forehead and fullness of temple; what dainty little hands; what a soft, sweet neck for nestling a mother's lips!

For two days Abigail Drew lived in the awful joy of one who drains the nectar from a cup which, when emptied, must be dashed to earth. She tried to put away the thought that she and that little baby girl must part. She tried to make those two precious days heaven enough for all of life. She tried, with all the dutifulness and reverence of her nature, to bow to her brother's will and be content. But every hour the whisper in her heart grew stronger and more insistent—"Cleave to the child. Keep her, cherish her. She is yours, a gift of God, the answer to your life-long prayer."

At last she went to her brother and poured out her heart with an intensity of passion he had never suspected in that quiet, reserved, meekly subservient sister of his. But, although surprised and disturbed, Nathan Drew was not moved. His heart remained obdurate. To him, the thought of a foundling child in the house was unendurable. Never a lover of children, always convinced in his own heart that childlessness was the more blessed state, how could he be expected to look with favor upon an adopted baby, a child concerning whose antecedents and propensities one knew absolutely nothing? No! he would not hear to it. To the Foundling hospital at Mayfield the little waif must go.

Towards the evening of the last day of her probation, Abigail Drew began to gather together certain little treasures of her own—heirlooms. Her mother's Bible; the laces left her by her Aunt Judith; an old-fashioned watch and chain; six silver spoons worn thin as paper—these and a few other things she wrapped in a bundle, and then, taking baby and bundle in her arms, she went out, closing the kitchen door reverently and softly behind her. Down the road, through the haze of the late afternoon, she walked, as one in a dream, leaving behind her all that she had ever known and loved hitherto.

From the distant meadow came the sound of whetstone on scythe-blade—what a clear, cheery ring! How could Nathan beat such music, with banishment for the babe—for both of them, did he but know it! in his heart?

Beyond the bridge Abigail turned into the woods and followed the stream westward, for the road ran too near the meadow, where Nathan and his men were haying. The child fell to crying, but she nestled it and kept on. Just before sunset she came out of the woods upon another road and followed it southward. The summer dusk began to deepen, yet she met no traveler and passed no house. What a lonely country it was, that New Hampshire mountain valley! The great hills looked down over the woods like stern-faced giants. The night air smelled of swamps and piny glens and deep-buried solitudes. The voices were all those of wild creatures, mysterious and hidden. How the weary, heart-sick woman longed for the sight of a roof, a chimney, an open door—especially for the face of one of her own sex. Only the heart of a woman understands a woman's heart!

At last, when the fireflies began to drift across her path like sparks from the crumbling embers of the sunset, Abigail, turning a bend in the road, came suddenly upon the welcome glow of a farm house window. She hastened forward, and, turning into the little path between the lilac bushes, approached the open door. A man sat upon the doorstep, smoking, and as he saw the ap-

proaching figure he rose and called his wife.

A buxom, sweet-faced woman came bustling to the door, skewer in hand. The moment Abigail's eyes rested upon her face, she cried:

"Lucinda Jones!"

The skewer fell clattering upon the floor, and the two women rushed together, like amicable battering rams, the arms of the larger embracing friend and child in their expansive embrace.

"Abigail Drew! Be you still living in these parts? I heard, away out in York State, where we just moved from, that you and your brother had gone West twenty years ago. My! and you've been and married and got a baby! Come in—come in! Lorenzo, fetch the rocker out of the settin'-room. How glad I am to see you again, Abigail. I thought you and me was parted forever."

How straight love had led her wandering feet! Abigail sank down in the cushioned rocker and marveled at the cheerful firelight playing on the face of the sleeping babe. Welcome—refuge—sympathy! Ah! she had not obeyed the inward voice in vain.

Six weeks was Nathan Drew a-searching for the treasure he had lost. He drove east, west, north and south, ping at every mountain farm house seek news of his sister. Nobody seen her going or coming. The yawning earth could not have swallowed her more completely.

But at last he found her. She was sitting with her baby on a low chair under the lilac bushes, and he spied her before he had reached the house. She saw him at the same moment, and, springing up like a hunted creature, made as if she would have fled. But he stopped her with a pleading gesture, and a look on his face such as she had not seen since they were children together.

"You don't know how I've missed you, Abigail," he said, simply, drawing rein in front of the lilac bushes. The man looked haggard and worn, and there was a pathetic tone in his voice.

"I can't go home with you, Nathan," said Abigail, firmly; and she pressed the rosy child closer to her bosom. Yet there was a yearning look in her eyes that her brother was not slow to interpret.

"I've thought it all over since you left, Abigail," he said; "and it's be'n borne in upon me that, per'aps, I was wrong about the child. Come home, and you shall keep it as long as you live. I won't say another word. It's the only love affair you ever hed, Abigail, and I ain't a-goin' to stand any longer between you and your heart."

The tears welled to Abigail's eyes as she came out into the road with her child. "Put your hand on her head, Nathan," she said, "and swear to me that you will never part us. Then I will go home with you."

Nathan Drew hesitated a moment. Then he touched the child's head with the tips of his horny fingers, and said:

"I swear it, Abigail."

So they two and the child went home together.—New York Evening Post.

Send Kansas Farmer Co. \$1.20 and get one year's subscription to your State agricultural paper and Rand, McNally & Co.'s "War Atlas," containing sixteen pages of colored maps—Cuba and Havana harbor, Philippine islands and China, West Indies, Spain and Portugal, North America, United States, Europe, and one page showing flags of all nations.

Temperance agitation in England consists in seeing that the drinker gets pure beer and other drinks, and that he gets the worth of his money; no one seems to think of prohibiting the traffic.

The Young Folks.

THE YARN OF THE BO'SUN'S MATE.

"I'll tell you a tale,"
Said the bo'sun's mate,
"I'll tell you a tale of the sea;
Many yarns I've told
Of the ocean bold,
But the awfulest yarn that ever I told
Ain't as bad as the tale I'll now unfold;
And your hair'll be on end, and your blood
run cold—
Your blood run cold,"
Said he, said he;
Said the bo'sun's mate, said he.

"The good ship Jane,"
Said the bo'sun's mate,
"Was as staunch as a ship could be;
She sailed one night,
With a cargo tight
Of the yellowest gold, which shone so
bright,
That its shining blinded the steerman
quite,
And he ran on a rock that was out of
sight—
'Twas out of sight,"
Said he, said he,
Said the bo'sun's mate, said he.

"Now there we was,"
Said the bo'sun's mate,
"With the ship a leakin' free;
So our strength we spent,
For to fix the dent—
But the lovely gold, overboard it went,
Which lightened the ship to that extent,
That we floated off—but without a cent;
Without a cent,"
Said he, said he,
Said the bo'sun's mate, said he.

"Oh, we all felt blue,"
Said the bo'sun's mate,
"And we dashed our eyes, did we;
Such an awful fate,
As to lose our freight,
Was a fearful thing for to contemplate,
When a great idea struck my pate,
And I says: 'Let's steal the Golden Gate!'
Let's steal the gate,"
Said he, said he,
Said the bo'sun's mate, said he.

"So on we sailed,"
Said the bo'sun's mate,
"Till the Golden Gate we see;
And I hope I'll die
If I tell a lie,
When all was still and no one nigh
We yanked that gate off on the fly,
And sailed from San Francisco sly;
From 'Frisco sly,"
Said he, said he,
Said the bo'sun's mate, said he.

"Now, what I say,"
Said the bo'sun's mate,
"Is as true as true can be;
A jewelry store
Bought up the door—
It weighed a hundred ton or more—
And all of us had wealth galore—
Which shows you why I live ashore—
I live ashore,"
Said he, said he,
Said the bo'sun's mate, said he.

F. M. Ranken, in Atlanta Constitution.

SOME FAMOUS PIANISTS OF BERLIN.

(Published in Topeka Capital, May 29.)

In a beautiful part of Berlin called Charlottenburg live a number of the world's most famous pianists. One who is known to America only by reputation—but who has played in all the cities of Europe with unbounded success—is Professor Heinrich Barth, one of the greatest pianists and pedagogues of the day. To the regret of the musical public, he has determined to give up all concert playing except his ensemble work with the famous Joachim quartet and the Barth trio. His wonderful technique is only equalled by his extremely sensitive and nervous temperament, and he frankly says he prefers to devote his time to his pupils than to the ordeal of concert work; and then he assures you gravely that he is "sehr alt." But except for his great art no one would imagine he carried the weight of fifty years. But his pupils still have the good fortune of hearing him play—at his home musicales—during the season. A short time ago he gave a delightful one, playing a prodigious program. We entered first a large music-room with highly-polished floor; here are two Bechstein grand pianos, and pictures and busts of his favorite composers—Bach, Beethoven, Brahms. After a cordial greeting from Professor Barth we must pay our respects to dear Frau Steinman, who has been a foster-mother to Barth and his sister since they were very young, and then are at liberty to wander through the large rooms opening from the music-room, finding many familiar faces, for Barth has hosts of American pupils. When Barth seated himself at the piano in his quiet, dignified way it brought to my mind my first impression of him, as being the most gigantic man I had ever seen. I am sure the heart of even the bravest young miss never beats "adagio" when first she goes through the ordeal of playing for this great man and greater artist. In 1887 Professor Barth was appointed court pianist by the Crown Prince, who later became Emperor Frederick I. (King Frederick III.). This honor Barth holds throughout his life. He has been connected with the Royal Hochschule here for twenty-seven years, but the number being so limited of those who are fortunate enough to be

accepted there as his pupils, he does most of his teaching in his private studio. Although possessing a retiring disposition, he has won the distinction of being one of the greatest teachers of Europe, and students from all parts of the world come here hoping that it will be their privilege to be counted as one of his pupils.

A short distance from Professor Barth's we find the home of another great artist, Ferruccio Busoni, who is constantly adding to his already great laurels, sharing them between his marvelous playing and his own compositions. He is concertizing most of the time, but calls Berlin his home, and to meet him personally and to catch a breath of his music-room is real inspiration. First there is his Steinway piano, which is a joy in itself, for with all the great advantages Germany offers it has no pianos to equal our Steinways. Extending from the floor to the ceiling on three sides of the room are beautifully-carved shelves filled with music books and scores. Many large laurel wreaths are scattered about, the ribbons of which bear the names of many countries, the laurel wreath being the token of highest appreciation tendered an artist. M. Busoni is an Italian, while his charming wife is from Finland and is a very fine linguist, although she did tell me seriously that Boston was a "sorry place" to live in. Their dear little son, Bennie, is an American, having been born while they were living in Boston. He is very musical, and delights to climb up on the piano stool and imitate his famous papa. M. Busoni, whose head is so often compared to that of the famous picture, "The Christ," is an artist one finds it no disappointment to meet in private life. No footlight illusions are shattered. He seems indeed an ideal artist.

Overlooking the Kurfuerstendamm in a charming apartment is the home of Madame Teresa Carreno, although she says with much pride that she is an American citizen. Wherever her home may be, she has friends and admirers all over the world, and it is indeed a pleasure to see this fascinating woman in her own "wohnung." One long to be remembered afternoon, during the Easter holiday, this pleasure was mine, she having just returned from a long and most successful concert tour. After climbing four flights of these dreaded German stairs and being told by a typical German maid that "gnaedige frau comes quickly," we were ushered into a drawing-room which is frescoed, hung and furnished in old rose. I could scarcely appreciate it, however, for my eyes were fixed eagerly on some glass doors that I felt sure must lead into her music-room. Soon Madame Carreno appeared, the same radiant and beautiful woman she always appears on the stage. On entering the music-room an immense piano, pictures, busts, flowers and music cases swam before my eyes, but after ensconcing myself among a pile of cushions on a large divan I realized I was on dry land after all and what it was that made this room so interesting. It is very long with parquett floor, a Bechstein grand stands in the center and huge black walnut music cases stand on either side. In one corner of the room is a large writing desk littered in artistic profusion with photographs of Madame Carreno awaiting her autograph, notes, flowers and manuscript music. Hanging above this are two large, old-fashioned pictures, which she said were of her father and mother. In the opposite corner is a tall pedestal with a "Venus di Milo" on it, surrounded by many lovely palms; also near the piano is a tree trunk filled with palms and flowers. There are many pictures and busts of musicians scattered about; and then I noticed another pair of glass doors which soon opened, and Madame Carreno took us into the dining-room to join a "kaffee klatch." Her daughter, Teresita, whose name is already famous in America by the "Teresita waltz," written and played for her by her illustrious mother, was home for her Easter vacation. With a number of Scotch school friends, chaperoned by a severe-looking German lady, some shy German frauleins and a few other fortunate Americans, we sat at the table for three hours listening to Madame Carreno talk in her own fascinating way. She told many interesting anecdotes of her early career, expressed her sincere admiration for many other great artists, and finally became as excited as any loyal American over the mention of our pending war. Two charming little daughters were brought in from the nursery for us to greet. I asked Miss Teresita if she wished to follow in her mother's footsteps, and she said it was her highest ambition to be a great pianist. Madame Carreno looked up quickly and said, "Yes, poor child, she

thinks it would make her happy. She little knows what it means." I suppose Madame Carreno was thinking of the many trials and tribulations that she herself had passed through to bring her to the place where at least the glamour of fame is spread about her. Finally, as the guests began to depart we were forced to say good-bye, but I carried triumphantly away with me an autograph picture and the memory of her as a real woman instead of a mere stage illusion.

A block from Carreno is the home of Joseph Hofmann, the great young artist who is again making his name famous in America. Having had the pleasure of meeting him at a private musicale shortly before he left here, I asked him if he was looking forward to his American tour. He answered in a most enthusiastic manner that he was "eagerly anticipating it," and if he was thinking of the great triumphs which were to be his there, he certainly has realized them.

Another artist living here who has won a place in the American heart with his incomparable Chopin playing and interesting eccentricities, is Vladimir de Pachmann. He lives in a very simple way. One of the most conspicuous things in his music-room, aside from his piano, is a case of photographs, which he says, with very becoming modesty, contains pictures of all the great artists except himself, and after his death his, too, shall be added.

Adela Aus der Ohe lives here in a very quiet way with her sister, and comes to recuperate and rest after her concert tours.

The musical season is over. Concerts after Easter here are exceptions, and it seems almost a relief after the mad rush of great artists that one has the good fortune of hearing during the season. Two interesting artists were heard as the season drew to its close—D'Albert, with his series of recitals, one of which was devoted entirely to Beethoven sonatas, and the big Philharmonie was crowded with students bending eagerly over their scores, following each note that was played; and then came Mlle. Cecile Chaminade, from Paris, with her own compositions, accompanied by two singers who interpreted her charming songs to her own beautiful accompaniments. She also played many of her dainty piano compositions. It was a treat long looked forward to and which America will enjoy next season, as she says she intends "to sail across the deep blue sea."

CELESTE NELLIS.

Berlin, May 1, 1898.

Human Contrariness.

"Wonderful how a sense of duty interferes with what had before been a pleasure and a luxury," remarked a Third avenue man to his doctor the other day. "When strawberries were first on the market and selling at Havana prices, my folks just couldn't do without them, and insisted in having them in plenty right up to a week ago."

"What brought about the change?"
"You did. When I told you that my wife and three girls were all feeling a little under the weather, you said that it was due to the changeable spring and, among other things, told me to give them plenty of strawberries. I mentioned it to them, and from that time to this they have regarded strawberries as medicine. One quart was on the table for three meals, and then my wife had them stewed to prevent their spoiling. Still they did not go, and the washwoman finally disposed of them at one sitting. I'll bet if you had said that they'd better leave strawberries alone they would have eaten half a bushel a day."—Detroit Free Press.

Wants to See the Real Thing.

There is in Detroit a citizen whose brilliant imagination would be worth a fortune to a young man of average intelligence and energy. He would have a perfect right to go after the laurels of Munchausen and expect to win. The old gentleman has never been out of Michigan except on one occasion, when he took the wrong boat and went to Windsor instead of Belle Isle, but his imagination supplies all defects of travel, and the current excitement stimulates him to his best.

"Biggest fight I ever had," he echoed to one of his audience on the horse block the other evening. "I really never had what you might call a fight. During one engagement in the Mexican war I was shot four times, and knocked down and run over by a couple of gun carriages, but I never called that anything more than a tussle. I simply did my duty and hadn't thought about the matter till you brought up the subject of fighting."

"I think that the nearest I ever

came to being frightened was when I was doing the Rockies on foot for my health. I camped one night with a party from Boston that I ran across, and in the morning walked a couple of miles to a stream to get some trout for their breakfast. I had landed about half a bushel when I heard a noise at my back, and there was a big grizzly helping himself. Not having my usual presence of mind, I jumped up, caught the bear by the tail and went to kicking him in the ribs. He was so surprised at this treatment that he took to his heels. I socked a fish hook into his tail, paid out line and drove him into camp. But that was nothing. What I want to do, if I can, is to go to Cuba and have some real excitement."—Free Press.

Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.
F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.

"The German baker had the most ingenious turnout in the fancy dress bicycle parade." "What was it?" "His wheels were exact imitations of two pies." "That doesn't seem so remarkably funny!" "No, but the way he describes it got him the prize." "How was that?" "He said, 'Dot's mein picycle.'"

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Low excursion rates for the round trip.

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Ottawa Chautauqua Assembly,

Forest Park, Ottawa, Kas., June 13 to 24, 1898. Tickets on sale June 11 to 24, inclusive; at one fare, \$1.50, for round trip, good for return until June 27, 1898. If proximity of station to grounds and perfect train service are inducements, your ticket will read over the Santa Fe. Ask W. C. Garvey, Agent, A. T. & S. F. Ry., about it. W. J. Black, G. P. A.

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New 1898 Model Ladies' and Gents' Bicycles are now being sold on easy conditions as low as \$5.00; others outright at \$15.95, 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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WANT IN WITH THE UNITED STATES.

Ever since the commencement of the war between this country and Spain, Great Britain has manifested the greatest possible friendliness to the United States. English statesmen and many leading English papers have openly advocated an Anglo-American alliance which shall make the English-speaking people well-nigh invincible against any possible combination of foes. Our country has experienced a good deal of satisfaction at this friendly attitude and has been pleased with the haste it has caused on the part of Russia to declare in a semi-official way that the friendship of that country for America is of very long duration and that the interests of both that country and the United States are such that this friendship must be perpetual. Scared at the shrinkage of the American demand for French gowns and other finery, and alarmed at the proposition of England for an alliance, France has become profuse in professions of friendship for us. Germany has been officially friendly to America from the beginning, but the German papers have been outspoken in friendliness for Spain. The proposition to form an Anglo-American alliance has sounded a strange note in German ears. A few weeks ago France and Spain talked of a Latin alliance. This, of course, did not include Germany. Both the Angles and the Saxons—who gave the name to the Anglo-Saxon branch of the Aryan race—were Germanic. The Anglo-Saxons in America have a still larger infusion of German blood, about one-fourth of the people having a direct German ancestry. If the Western world were intending to divide into hostile camps along lines of ancestry and blood relationship, England and the United States must both be reckoned as descendants from Germany, and the fatherland would feel strangely in turning against his children.

But, while British advances have not been snubbed in this country, our reply has been practically that we need no help in the little affair now on with Spain; that we are pretty well fixed for taking care of ourselves in any contingency that is likely to arise; that we are of a peaceable disposition and were advised several years ago by Washington to avoid entangling alliances; that under the Monroe doctrine it was not possible for any other nation to stop the outrageous conditions in Cuba, and we were therefore obliged to do it. Further, we have observed that when John Bull enters into an alliance he usually insists on being the whole thing; that we have become much accustomed to be more than half of everything in which we are concerned, and we very much apprehend that there might be some friction on this point should the two nations undertake the proposed alliance. We have found John Bull a very good neighbor and a splendid customer for our farm products. But we have observed that he is frequently involved in disputes in many quarters of the globe and we prefer to continue our freedom from obligations to take up his quarrels.

Of course there are Anglo-manics in the United States, and they claim great importance for themselves and consideration far beyond that to which their numbers entitle them. There are also here many Irish whose sentiments towards England are not more friendly than those of France.

But the main body of substantial Americans, whose opinions are those in

accordance with which the greatness of the United States has been attained, are averse to everything that savors of violent change of policies under which we have prospered. They are especially averse to influences which may detract from the importance of the common people as the controlling force in our institutions. This same conservative element was first, loudest and most persistent in demanding that we go to the help of the struggling Cubans. This element sends its sons willingly to fight the battles of the oppressed and is anxious to make our abundant supplies available immediately for the relief of the suffering. It is impatient of delays and red tape while women and children and helpless age are starving near to our shores. But these noble-minded and generous people oppose every proposition to recede from republican simplicity. To them the greatest danger in the suggested alliance is to the common people of this country from too great intimacy with aristocracy.

They are likely to doubt the advisability of annexing the Philippines, on the ground that such possessions may have to be governed by officials sent from America and that in this may be sown the seeds which shall ripen into an official class—a class of spoilsmen removed from the restraints which our democracy imposes upon home officials—and that the incentive to the creation of a home official class will receive an impetus. They also fear a repetition of all history in spoliation of the distant dependency by officials too far removed from potent restraint, and by commercial greed under the guise of official protection. The thoughtful know that official and commercial greed have despoiled Spain's colonies and that the baneful reflex influence on the people of Spain is one of the great causes of her phenomenal decline at home and abroad during the last 100 years—the 100 years during which through frugality, self-sacrifice and honest effort America has become a nation of the first importance and her people the most prosperous in the world.

The people who hold these views are not narrow nor uninformed; they are not suspicious, but they realize the dignity and the advantages of paddling their own canoe, and they will be likely to remember, at the polls, upon the first opportunity, any party that lightly disregards their deeply-rooted convictions against entangling alliances and in favor of democratic institutions in the simplest possible form.

A FARM HOME.

How attractive a farm home may be is well exemplified at the home of Mr. L. R. Taylor, near Grantville, where the June meeting of the Shawnee County Horticultural Society was held. About four miles east from North Topeka is the old townsite of Calhoun, once the county seat of Calhoun county, in the Territory of Kansas. Here still stands a portion of the old log building which was used, nearly half a century ago, as a court house. Mr. Ezekiel Marple, who attended the horticultural meeting last Thursday, was able to give an interesting account of some of the early doings at that seat of justice. He first saw the old log court house in 1856. It was then about two years since it had been erected. Most of the jack oak logs are still in a good state of preservation and the chinking is scarcely the worse for the wear—this may have been renewed, however. Some of the markings of subdivisions of the old town are still discernible, and Mr. Taylor has had the rare good taste to perpetuate the location of divisional lines by making his permanent improvements conform to them. But the farm home of which we write is not in the old log court house. This is occupied, however, as was evidenced by a pair of round black eyes, a little black woolly head and a flat nose which appeared at the window. This temple of justice of former days is now the castle of a colored assistant on the farm.

In going to Mr. Taylor's from Topeka one goes down the river road on the north side through a splendid farming country along the Kaw bottom. Presently the bluffs and the river come so close together that there is room only for the railroad between them, and, though the oldest settler, the road has to take second choice and climb part way up the side of the bluffs. This is done by moderate grades and carries one up into fine views of the stream and country beyond. A few ups and downs and the space between river and bluff becomes more generous and the road again descends to the level land.

Mr. Taylor's farm is entered from three places on the river road; the writer happened to enter at the middle

one between well-cultivated fields on the bottom. At the foot of the hill the timber was entered and for about a third of a mile the drive wound through the timber seeking the easy grades. Coming out at the old court house the road continued around the orchard past a field of wheat standing four or five feet high, and up into the oak opening on top of the hill where stands the residence. It became evident immediately that three things had been used abundantly, namely, taste, brains and money. Some one suggested to the writer that Mrs. Taylor was responsible for the selection of the site for the home and much of its development. Without inquiring into this matter, it is enough to know that some one able to appreciate a beautiful natural situation and to adapt the development to harmonize with noble surroundings has selected and planned with the eye of an artist. From the big double veranda which extends half way around the house the view to the southeast extends over some ten miles of interspersed fields and woodlands along and across the valley of the river. Looking south there is the waving wheat field covering the hillside and extending to the valley road. Next is the Union Pacific railroad with its many trains. Beyond is a cultivated field, then a fringe of timber, and then the river, which appears to be a lake, since it disappears behind the timber both above and below. Beyond the river stretch the farms on the south side, a picture of prosperity and happiness. On the return another drive was taken. This traverses the woods for half a mile or more and gets down to the river road by very light grades.

Who that has a rightly constructed mental and aesthetic organization, which has not been perverted by artificial surroundings, would not place above and before the ill-smelling and hot streets of the city such a situation as this, with its perfume of orchards and meadows and blossoming grain, with its odors of the forests, with its pure air and enlivening scenery?

BRAVERY AND CHIVALRY.

Santiago is an important Cuban city on a bay of the same name on the southern coast of the eastern part of the island. From the sea the entrance presents the appearance of a cleft in the rocks. This is a long and crooked opening which connects the bay with the Caribbean sea. Prominent above the entrance stands Morro castle, which is said to be well furnished with modern guns of large caliber and the best makes. Every favorable point along the narrow channel is strongly fortified. But one ship at a time can pass this strait. In this bottle-like harbor of refuge Admiral Cervera ran the Spanish fleet about two weeks ago. The entrance has been carefully torpedoed.

In this retreat Spanish ships are thought to be safe from attack from our fleet. They are also safe from interfering with our other operations in Cuba so long as they remain bottled in Santiago bay. They dare not come out one at a time to meet even a small detachment of our heavier-armed ships. Only in case of a West Indian hurricane compelling our vessels to go far from shore or seek some harbor for safety can Cervera hope to escape. But should such withdrawal of American vessels become necessary the enemy might escape after the cessation of the storm and before the blockading vessels could return.

To guard against the possibility of escape a young naval constructor proposed that the collier Merrimac be run into the narrow entrance to Santiago bay, turned across the channel, and sunk. This young officer, Lieutenant Richard P. Hobson, asked to be allowed to execute the plan, and obtained the consent of Admiral Sampson. It was desired to have six men assist Lieutenant Hobson. It was known that the expedition was one of the greatest peril, involving exposure, without protection, to fire from many Spanish batteries at close range. Volunteers were called for. About 4,000 seamen are said to be in the fleet and it is reported that 4,000 volunteers stepped forward and asked to be allowed to accompany Hobson. Daniel Montague, George Charrette, J. C. Murphy, Oscar Deignan, John Phillips and John Kelly were chosen, and H. Clausen hid in the vessel and took part against orders. Many a strong seaman shed tears on account of his disappointment at not being allowed to go.

The ship was stripped of everything that could be spared; was strung with torpedoes on the port side; towed a boat behind on which the men hoped to escape, and at the last moment an old catamaran was swung to her for emergencies. At 4 o'clock on the morning of June 3 the eight heroes took the Merri-

mac as gently as possible to the entrance to the bay. They were discovered by the Spanish watchers and the guns of Morro castle and many other fortifications poured iron hail all around them. They kept straight ahead, threw the vessel across the channel, and whether they themselves sunk her or she was sunk by Spanish shot is not yet known. Cadet Powell, in a steam launch, followed about a quarter of a mile behind the Merrimac, in order to take off Hobson and his men. He saw the ship's spars in such position as to make sure that she was sunk exactly where Hobson intended. But Powell was discovered and fired upon from the Spanish forts, so that it would have been madness to follow further. The row-boat in which Hobson and his men had hoped to escape was shot to pieces. But they got upon the old catamaran and paddled away so bravely that the Spanish soldiers could not bring themselves to shoot at them. Instead, they sent a boat to take them to shore. Only two were slightly hurt.

Their bravery appealed so powerfully to the chivalry of Admiral Cervera that he sent his chief of staff, under a flag of truce, to inform Admiral Sampson that the men were safe, that they would be well treated as prisoners of war, and would be exchanged whenever a suitable exchange could be made. Admiral Sampson sent money and supplies for the heroes by the Spanish messenger.

This entire event is one to be long remembered and to live in history on account of the bravery of Hobson and his little crew and as a justification of the claims of chivalry for the Spanish soldiers.

The annual session of Iowa Swine Breeders and the National Association of Expert Judges of Swine will be held June 14 and 15, at Des Moines, Iowa. Headquarters will be at the Kirkwood hotel. A banquet will be given on Tuesday evening by the Homestead Company. The program contains the names of many of the best-known breeders in the West.

When Cuba gets her working clothes on under conditions of just and stable government she will be able to furnish to the United States all the sugar we use. Cuban sugar is of the highest excellence and is cheaply produced and easily placed on shipboard.

The Kansas building at Omaha is to be dedicated June 22.

It is reported that oats are worth \$50 per ton in California, while raisins are worth but \$20 per ton. Horses are therefore fed on raisins instead of oats, and they are said to like the change.

Notice to Breeders.

Every Kansas breeder of improved stock who expects to exhibit at any of the fairs or the Trans-Mississippi exposition at Omaha, is requested to send particulars at once to H. A. Heath, Secretary Kansas Improved Stock Breeders' Association, Topeka, Kas.

Weak nerves indicate deficient blood. Nervous people find relief by purifying and enriching their blood with Hood's Sarsaparilla, the great nerve tonic.

Hood's Pills are the only pills to take with Hood's Sarsaparilla. Cure all liver ills.

The Ottawa Chautauqua Assembly has arranged to furnish an abundant supply of pure spring water from covered steel tanks conveniently located on the grounds, properly cooled, and to be drawn from faucets. The program is excellent. Forest park is beautiful. The new closet on the east side, on the style of the house of public comfort, erected last year, will be a welcome improvement. The Assembly opens June 13, with Professor DeMotte's great lecture, "The Harp of the Senses." No one can afford to miss it.

Tours in the Rocky Mountains.

The "Scenic Line of the World," the Denver & Rio Grande railroad, offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the trans-continental traveler the grandest scenery. Two separate and distinct routes through the Rocky mountains, all through tickets available via either. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman sleepers and tourists' cars between Denver and San Francisco. The best line to Utah, Idaho, Montana, Oregon and Washington via the "Ogden Gateway." Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.

TAXATION OF MORTGAGES.

The questions of equity and taxation have been often presented to trouble the mind of the legislator with visions of double taxation and court objections. On the assumption that the owner of a mortgage on real estate is the owner of an interest in the mortgaged property and ought therefore to pay taxes on the value of his mortgage in the county where is situated the land in which the mortgagee is interested, the State of Oregon in 1882 enacted a law taxing real estate mortgages at their real value in money and providing that the taxes so paid should be deducted from the amount of the taxes against the property which would but for the mortgage have been assessed against the mortgagor. The indebtedness is not sought to be taxed, but only the security as expressed in the mortgage.

A large amount of Oregon mortgages were sold in California and the California holders contested the right of Oregon to tax these securities when held in another State. After going through the usual course in the lower courts the matter finally came up in the Supreme court of the United States, which final tribunal sustained the Oregon law.

Justice Gray, who delivered the opinion of the court, said that, taking all the provisions of the statute into consideration, its intent and effect were not difficult to discern. The personal obligation of the mortgagor to the mortgagee is not taxed at all. The mortgage and the debt secured thereby are taxed as real estate to the mortgagee, not beyond their real cash value, and only so far as they represent an interest in the real estate mortgaged. The debt is not taxed separately, but only together with the mortgage; and is considered an indebtedness within the State for no other purpose than to enable the mortgagor to deduct the amount thereof from the assessment upon him in the same manner as other indebtedness within the State is deducted. And the mortgagee, as well as the mortgagor, is entitled to have deducted from his own assessment the amount of his indebtedness within the State. The result is that nothing is taxed but the real estate mortgaged, the interest of the mortgagee therein being taxed to him and the rest to the mortgagor.

There is no double taxation. Nor is any such discrimination made between mortgagors and mortgagees, or between resident and non-resident mortgagees, as to deny the latter the equal protection of the laws. No question between the mortgagee and the mortgagor arising out of the contract between them in regard to the payment of taxes or otherwise is presented, says Judge Gray, or can be decided upon the record. The case accordingly reduces itself to the question whether the tax act, as applied to mortgages owned by citizens of other States and in their possession outside the State of Oregon, deprives them of their property without due process of law.

Discussing this point, the court notes that by the law of Oregon, as indeed of some other States of the Union, a mortgage of real property does not convey the legal title to the mortgagee, but creates only a lien or incumbrance as security for the mortgage debt; and the right of possession, as well as the legal title, remains in the mortgagor, both before and after condition broken, until foreclosure. Nevertheless it has been held by both the Supreme court of the State and by the United States Circuit court for the district of Oregon that the State has the power to tax mortgages of lands in Oregon, though owned by citizens and residents of other States. Thus in *Mumford v. Sewall*, it was declared that "all subjects, things as well as persons, over which the power of the State extends, may be taxed." "A mortgage, as such, is incorporeal property. It may be subject to taxation." "Conceded that the debt accompanies the respondent's person and is without the jurisdiction of the State. Yet the security held is Oregon security. It cannot be enforced in any other jurisdiction. It is local in Oregon absolutely as the land which it binds." Since the power of the State over the mortgage is as exclusive and complete as over the land mortgaged, the mortgage is subject to taxation by the State unless there is constitutional limitation to the contrary.

The opinion also quotes from *Dundee Mortgage Company vs. School District*, where Judge Deady said: "A mortgage upon real property in this State (Oregon), whether considered as a conveyance of the same, giving the creditor an interest in or right to the same, or merely a contract giving him a lien thereon for his debt and the power to enforce the payment thereof by the sale of the premises, is a contract affecting

real property in the State, and dependent for its existence, maintenance and enforcement upon the laws and tribunals thereof, and may be taxed here as any other interest in, right to or power over land. And the mere fact that the instrument has been sent out of the State for the time being, for the purpose of avoiding taxation thereon or otherwise, is immaterial."

After citing these various authorities, Justice Gray declares that the power of every State to tax all property, real and personal, within its jurisdiction is unquestionable. The Supreme court has often in the past indorsed the principle that personal property may be taxed either at the domicile of its owner or at the place where the property is situated, even if the owner is neither a citizen nor a resident of the State which imposes the tax. The State, Justice Gray asserts, may tax real estate mortgaged as it may all other property within its jurisdiction, at its full value. It may do this either by taxing the whole to the mortgagor, or by taxing to the mortgagee the interest therein represented by the mortgage, and to the mortgagor the remaining interest in the land. And it may, for the purposes of taxation, he declares, either treat the mortgaged debt as personal property, to be taxed, like other choses in action, to the creditor, at his domicile, or treat the mortgagee's interest in the land as real estate, to be taxed to him, like other real property, at its situs.

KANSAS CROPS ABOVE PAR.

A summary of reports from nearly every township in the State to the Kansas Board of Agriculture shows conditions of the various growing crops on May 31. It says:

Winter Wheat.—Excessively and almost uninterrupted wet, cool weather for several weeks has caused the winter wheat prospect to be probably the most promising in the State's history at the time of year. Its stand and growth are not only very excellent, but the entire absence thus far of injury by insects is equally noticeable. From scattered localities presence of a few last year's chinch bugs is mentioned, but in no instance are they alluded to as doing, or likely to do business. A little rust is alluded to by a correspondent here and there, but apparently more with a view to relieving his report of monotony than to suggest harm or fear. The general average of condition for the State is 103.

Corn.—The same continuous wet, cool weather so favorable to the development of the wheat plant has been adverse to the corn situation, causing seed in the ground to rot, and retarding plowing, planting, germination and cultivation. Hence much planting or replanting is yet being done (mainly with listers) and that portion which is above ground has made but limited growth, although in some localities cultivation is in progress. Within a few days the situation has considerably improved. For the entire State the condition averages 79.

The following table gives the average condition of winter wheat and corn by counties:

	Wheat.	Corn.
Allen	102	75
Anderson	96	61
Atchison	99	56
Barber	100	80
Barton	98	81
Bourbon	83	74
Brown	100	73
Butler	106	73
Chase	105	73
Chautauqua	96	88
Cherokee	90	77
Cheyenne	50	100
Clark	78	78
Clay	101	81
Cloud	101	93
Coffey	105	98
Comanche	99	92
Cowley	99	80
Crawford	79	74
Decatur	82	96
Dickinson	109	83
Doniphan	99	78
Douglas	97	68
Edwards	90	79
Elk	106	93
Ellis	99	78
Ellsworth	106	88
Finney	89	99
Ford	95	91
Franklin	91	65
Geary	97	93
Gove	81	101
Graham	85	87
Grant	89	89
Gray	85	95
Greeley	90	95
Greenwood	104	71
Hamilton	74	95
Harper	109	77
Harvey	121	67
Haskell	78	92
Hodgeman	82	96

Jackson	98
Jefferson	100
Jewell	105
Johnson	101
Kearny	111
Kingman	106
Kiowa	99
Labette	66
Lane	69
Leavenworth	108
Lincoln	108
Linn	97
Logan	90
Lyon	91
Marion	100
Marshall	108
McPherson	108
Meade	116
Miami	98
Mitchell	109
Montgomery	84
Morris	102
Morton	97
Nemaha	101
Neosho	64
Ness	84
Norton	95
Osage	100
Osborne	106
Ottawa	104
Pawnee	94
Phillips	90
Pottawatomie	101
Pratt	94
Rawlins	81
Reno	104
Republic	105
Rice	99
Riley	103
Rooks	109
Rush	77
Russell	106
Saline	103
Scott	76
Sedgwick	112
Seward	101
Shawnee	100
Sheridan	80
Sherman	78
Smith	100
Stafford	106
Stanton	65
Stevens	85
Sumner	102
Thomas	72
Trego	88
Wabaunsee	96
Wallace	80
Washington	109
Wichita	78
Wilson	93
Woodson	92
Wyandotte	107

Oats.—The average condition is 84. Most of the counties having the largest acreages sown report the most promising outlook. The highest conditions are in Edwards, 104; Mitchell, 106; Osborne, 106; Rooks, 107, and Sheridan 104, and Harvey with 61 is lowest. Throughout the State the conditions are more uniform than one year ago.

Potatoes.—The acreage planted to potatoes is estimated as somewhat less than one year ago. Condition, 90.

Sorghums.—The reports indicate a continued interest in and an increase in acreage of the various sorghums for forage and grain, in every portion of the State. The planting likely this year is represented as at least 10 per cent. greater than last. Condition of that planted and up, 90.

Condition of Other Crops.—Spring wheat, 95; rye, 95; barley, 101; castor beans, 88; tame grasses, 100; alfalfa, 104; prairie grass, 101; apples, 71; peaches, 82; grapes, 90; cherries, 86.

Live Stock.—All kinds are invariably reported in good health, barring a few instances of "cholera" among swine, and blackleg among calves and yearlings. The humid weather has made the growth of all grasses very rank, not only affording luxuriant grazing but a promise of the heaviest hay crop known. Alfalfa is unusually forward and rank and its harvesting has already begun.

Preserve the Birds.

The destruction of the birds has become so serious a matter that many of the most thoughtful minds of the country have anxiously considered means by which this wanton slaughter may be stayed. We have the testimony of the leading scientists of the United States to show that, unless the killing of birds soon ceases, only a very brief time will elapse before the feathered tribe will become extinct. In such event the evil consequences to our agricultural interests are past all computation. The destruction of our crops by myriads of insects will be as disastrous as was the fearful famine which has just devastated India.

To avert such a calamity various plans have been devised. Among the statesmen who have become interested in this matter are Hon. George F. Hoar, Senator from Massachusetts, and Hon. John

F. Lacey, Representative from Iowa, both of whom have introduced bills in Congress relating to the question. Mr. Hoar's bill provides restrictions upon the importation of the bodies or plumage of certain birds, and upon the transportation of the same between the several States. Exception is made in the case of the ostrich and some other birds whose plumes can be taken without loss of life. Senator Hoar's bill has passed the Senate and now goes to the House. This bill is numbered "Senate 4124."

Mr. Lacey's (House) bill provides for extending the powers and duties of the Commission of Fish and Fisheries so as to include game birds and other wild birds useful to man, "by propagation, distribution, transportation, introduction and restoration" of such birds. If you are a friend to the birds and to the agricultural interests of your country we request that you write, at the very earliest moment, to members of Congress asking them to vote for these bills. Among the members whose influence is most necessary are the following: Hon. Thos. B. Reed (Speaker), Hon. J. W. Bailey, Hon. Benton McMillan, Hon. J. E. Richardson, Hon. Richard P. Bland, Hon. Jerry Simpson, Hon. S. E. Payne, House of Representatives, Washington, D. C.

Please write to the above (and to any others whose names may occur to you), asking them to work and vote for these bills when they come up for consideration.

We heartily concur in the foregoing suggestions. Carter H. Harrison, Mayor of Chicago; William R. Harper, President University of Chicago; D. G. Elliott, Curator of Zoology, Field Columbian Museum; St. Ignatius College, per J. F. X. Hoeffer, S. J., President; F. C. Chamberlain, President Chicago Academy of Sciences; Ruthven Deane, President Illinois Audubon Society; Frank G. Baker, Curator Chicago Academy of Sciences; Nature Study Publishing Co., publishers of "Birds," "Nature and Art" Publishing Co., D. B. Ward, Secretary; J. M. Wiers, Naturalists' Agency.

All friends of birds are requested to give these suggestions their immediate attention. All those willing to contribute a small amount toward furthering this object will confer a favor by forwarding their contributions to Miss Kate W. Grove, assistant editor of the *Epworth Herald*, Chicago. Names of Congressmen from the several States, literature relating to the subject, suggestions concerning the formation of clubs, and other matters of interest to bird lovers may be obtained by writing to Horace H. Waters, 357 West Van Buren street, Chicago.

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.

A gentleman of financial antecedents staying at a Manitou hotel was suddenly awakened in mistake by the bell boy at an early hour, with the greeting that the day was breaking on Pike's peak. "Led id break," growled the sleeper, "It don'd owes me nothing."

Forest park at Ottawa is in its loveliest garb, and preparations for the coming Assembly, June 13-24, are being pushed. The lecture platform is especially strong throughout, and the musical department is the very best. Eminent specialists have been provided in educational lines, and the special features are unusually attractive.

No man should attempt to break a colt until he has broken himself, and learned to control his own passions.

Horticulture.

THE SAN JOSE SCALE.

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

Owing to the seriousness of its attacks, unquestionably this scale is the worst pest known to the orchards of this continent. Owing to a lack of information or to indifference many do not consider the importance of its attacks, but those who have had actual experience know too well the immense damage it may do, the difficulty of its extermination and of the need of immediate action upon its first appearance. Thus far no evidence of its presence in Kansas has been detected. The rapid spread of the San Jose scale during the past few years in this country has given cause for serious alarm. Its presence in an adjoining State and its seeming adaptability to a large range of climates place this State in imminent danger. If detected active steps should at once be taken for its eradication. On account of its minuteness, its unfamiliar form, its omnivorous character and its wonderful powers of reproduction, it is the dreaded foe of the orchard. Added to this is the easy means of introduction through the purchase of nursery stock from nurseries in close proximity to infested districts.

The name San Jose comes from the district of San Jose valley, California, where its ravages in this country were first detected about the year 1873, since which time it has spread into Missouri, Illinois, Ohio, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Alabama, Florida, Massachusetts, Delaware, Mississippi, Michigan, Ontario, British Columbia, Canada, Oregon, Texas, Idaho, Washington and New Mexico.

It attacks a large number of fruit and garden trees and shrubs. Apple, pear, peach, plum, cherry, grape, apricot, raspberry, gooseberry, elm and Osage orange are those particularly to be mentioned. The bark of trees when badly infested with this pest loses its natural, vigorous, healthy appearance and takes on a rough, gray, scurfy deposit. (See Fig. 27.) This deposit consists of a large number of nearly circular scales, composed of secretions material and moulted skins. There are a number of this class of insects more or less destructive in their habits. To determine one from another is the work of a specialist. There are, however, some general characteristics of the San Jose scale which may be detected by the naked eye or by the aid of an ordinary hand lens. It is circular in form, very minute, not more than one-sixteenth of an inch in diameter, slightly convex, with a black or yellowish point at the center. Beneath this scale lives the real insect, the author of all the injury. The young scale as soon as it is born crawls from under the female scale, and after inspecting its surroundings for a few hours inserts its beak into the tissue of the plant. Here it remains until it dies. In about three days the insect is enveloped by a scale covering. By winter the scale is about half grown, and as soon as the warm weather sets in the insect commences to feed and to develop, reaching maturity about the middle of May. From this time on the young begin to emerge, and continue emerging until the arrival of cold weather, making a number of generations during the season—probably four or five. During a season, as estimated by Howard and Marlatt, Bulletin No. 3, United States Department of Agriculture, Division of Entomology, a single female may reproduce 1,608,040, 200 individuals.

WHAT TO DO.

As soon as scale specimens of any nature are discovered they should be sent at once to this department for identification. The worst danger is from importation on nursery stock. It has become customary during the last few years to have certificates from entomologists accompanying orders from nurseries, where stock was liable to be infested, showing the nurseries to be free from scale. Too much reliance should not be placed in these certificates. The giving of certificates has been abused in many instances by nurserymen to cover all stock shipped, whether from nursery inspected or from other nurseries. Then again it seems absurd that a nursery of thousands of trees could be thoroughly inspected by one man. In some States certificates are not given, relying upon the personal examination by the buyer upon receiving stock. This is perhaps the most satisfactory.

The remedies usually employed at pres-

ent in combating the pest are whale oil soap and water, at the rate of two pounds of soap to one gallon of water, used as a winter wash, followed by a spray of strong kerosene emulsion at intervals through the summer. Inasmuch as experiments are being carried on in infested districts to devise more satisfactory remedies than the above, it seems best to postpone further discussion until the insect makes its appearance in the State, when the latest information will be given to the public. Those desiring further information regarding the San Jose scale should apply to Division of Entomology, Department of Agriculture, Washington, for Bulletin No. 3, new series.

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.

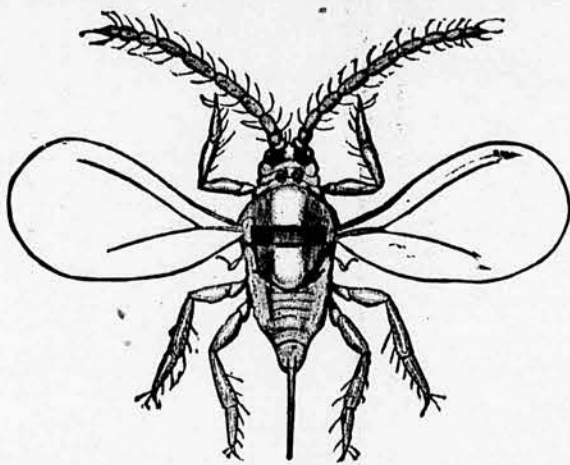


FIG. 26. San Jose scale. Male adult, greatly enlarged. (Howard & Marlatt, Bulletin 3, New Series, Div. of Ent., U. S. Dept. of Ag.)



FIG. 27. San Jose scale on bark. a. Infested twig. b. Bark of same, greatly magnified, showing various developments of San Jose scale. (Howard & Marlatt, Bulletin 3, New Series, Div. of Ent., U. S. Dept. of Ag.)



FIG. 28. Under side of San Jose scale. c. Adult female containing young, greatly enlarged. d. Anal fringe of same enlarged. (Howard & Marlatt, Bulletin 3, New Series, Div. of Ent., U. S. Dept. of Ag.)

What Shall Be Done With Strawberry Beds After Fruiting?

The Michigan Fruit Grower publishes the following from O. A. Nummer, of Iona, Mich., an experienced strawberry culturist, regarding the care of beds after fruiting:

"In compliance with your request for an article on the treatment of the strawberry bed after fruiting, we pen the following:

"This is one of the most, if not the most, important questions that confront the strawberry grower at this time of the year. The plants have just thrown nearly their last spark of strength into a large crop of fruit, and their vitality must be and is at a very low ebb.

"Now, if we are to bring those old devitalized plants back into a condition of 'fruiting vigor' again, we must go to work and meet old Dame Nature—head her off and turn her into the right channels, and, presto, it is done as easy as rolling off a log. But we must first have a clear conception of those laws working in and controlling the life habit of the strawberry plant.

"Experimenters and close students of nature are agreed upon the following:



It's easy to haul a big load up a big hill if you grease the wagon wheels with

MICA Axle Grease

Get a box and learn why it's the best grease ever put on an axle. Sold everywhere.

The life work of the species is to propagate itself; first, by seed (fruit), and then by division of the plant (runners). Of course, a plant will make runners before fruiting and will fruit after making runners—to a limited amount; and, if the conditions were favorable, the difference might be nearly imperceptible; and, too, varieties differ in this respect, as they have quite a diversity of habits. But, generally speaking, this rule may be considered as fundamental and depended upon.

"So, in handling the old bed we must keep the fact in mind that it is natural for the plant to make runners, or divide itself into many plants, all with badly-developed, if any, fruit buds. But if we go to work and keep off the runners, stimulate the plant into a good, healthy growth, we head off nature and direct her from the plant-making business into the bud-making business—a condition which may properly be called 'fruiting vigor,' with which (other conditions being favorable) a large crop may be expected; without which, failure is certain under favorable conditions. So, in managing an old bed, the main objects in view should be to keep the runners off to thin the plants, so that each individual plant will have room to expand and develop; to fertilize, if necessary, and to cultivate the ground and keep it in good tilth.

"We give these preliminaries for the reason that we believe it is well to know the underlying principles in the matter in order to go to work and carry them out in a practical way.

"First, we would look over an old bed and see if it was worth saving. If foul with June grass, sorrel, etc., the white grub has got in, it had best be plowed up at once, for it will cost more to care for it than the crop is worth. But if a bed is worth saving, our way of treating it is this: With a plow we turn a furrow about four inches deep, away from the row, forming a back-furrow in the alley and leaving about a foot of row; the furrows are turned right onto the mulch. If the weather is dry we follow the plow with the cultivator; if not, we prefer leaving it for a day or so, as it will cultivate much better if a little dry. We cultivate several times in a row as deep as possible, in order to stir and mix the mulch into the soil (fine manure may be spread on and treated the same way). After care is to keep the bed well cultivated and the runners off. Late in winter we mulch between the rows (never on the plants) with horse manure direct from the stable; we have used cow manure, but it isn't as satisfactory. The old vines over the row make covering enough for the plants. Our object in plowing is to strengthen and narrow up the row, break up and fine the soil—making a reservoir for the plants to draw from another year. After repeatedly trying different plans, we have come to the conclusion that this is the most scientific and practical plan to pursue."

Red cedar seeds are very slow to germinate, seldom doing so until the second year.

"I don't like your milk," said the mistress of the house. "What is wrong with it, mum?" "It's dreadfully thin, and there is no cream on it." "After you have lived in town a while, mum," said the milkman encouragingly, "you'll get over them rooral ideas of your'n."

INSECTS

Will not touch trees treated with VITA-NOVA. One dollar's worth treats twenty-five trees; last four years.

J. WILLIAMS BROS., Danville, Pa.

This will be a year of

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For Farm Produce.

Don't let insects and other vermin EAT UP ALL YOUR PROFITS. If you are bothered with Gophers, Squirrels, Prairie Dogs, Lice or Mites on poultry or stock, insects on plants, vegetables, etc., write us. We have positive remedies for all pests, cheap and easily used. Ask for circular L.

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In the Dairy.

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

THE VALUE OF SKIM-MILK IN CALF-RAISING.

Paper read by Prof. Charles F. Curtis, at National Creamery Buttermakers' convention at Topeka.

The magnitude and value of the skim-milk in our dairies is seldom fully comprehended. A conservative estimate would place it at \$60,000,000 to \$75,000,000 annually, with a possibility of exceeding \$100,000,000. It not infrequently occurs that under a judicious and intelligent system of utilizing this product, higher net returns are realized than from the butter fat. In many cases, however, the value of the skim-milk receives but little if any consideration. The fact that the value of so important a product can be largely ignored, testifies either to the short-sighted carelessness of the American dairyman or to a lavish endowment of favorable dairy advantages by nature. This product, like many other sources of wealth, is not fully appreciated. Its nutrients are so abundant and so readily available that even under the most profligate policy the skim-milk, if poured outright upon New England soil, would still enrich the country by about \$50,000,000 a year in the form of added fertility. Not only do we fail to appreciate its value in producing domestic animals, but recent investigations have shown that it constitutes a source of most economical and wholesome nutriment for the human diet as well. Dr. Atwater in his food and dietary studies has shown that five pounds of skim-milk will furnish the same amount of flesh-forming nutrients as a pound of beefsteak, and that two quarts of skim-milk have a greater nutritive value than a quart of oysters. The nutriment contained in 50 cents' worth of oysters can be bought in the form of skim-milk for 4 cents.

In the agricultural States of the corn belt protein is altogether the most expensive and most deficient nutrient in farm feeding stuffs. For want of protein many rations are unbalanced and fail to give economical results. Skim-milk at 25 cents per hundred furnishes protein more economically than oats 25 cents per bushel, and besides the feature of economy, no feed furnishes nutrients in a more available, palatable and digestible form than skim-milk when properly handled. Modern agricultural conditions will not long permit the extravagant waste of a product worth \$100,000,000 a year.

I am asked to discuss the value of skim-milk in relation to calf-raising. Permit me to say at the outset that under coming dairy conditions the dairy-fed calf is destined to be as important a factor as "Western extra" butter, and that the coming calf will inevitably owe its existence to skim-milk. The day is forever past when anything like a large percentage of either beef or dairy calves in the leading agricultural States can be profitably raised on whole milk. It is also true that upon what we make of the calf under these conditions depends the future of both the beef and dairy industries in the Mississippi valley. If there is anything in heredity, and there is, no man who expects to continue in the cattle business can afford to ignore the calf. The best methods of calf production are as essential to the permanency of the dairy industry as the ability to turn out high-scoring butter.

We have had this subject under investigation at the Iowa Experimental Station for several years, and I am pleased to be able to place before you to-day some illustrations of the stock produced and invite your consideration of the results from different methods. This illustration represents one of a lot of six grade steers purchased as calves when a week old from a farmer near the college at \$5 a head. They had no whole milk whatever after the first week but were fed exclusively on skim-milk and farm feeds and finished for market at 26 months of age. This steer at that age weighed 1,640 pounds, and was the best steer on the market when there were 26,000 cattle there. This illustration is an enlarged photograph of a carload of yearlings now being finished at the Iowa station. Part of these calves were bred on the college farm and the balance purchased from breeders near by. They were put into our experiment in December, 1896, and fed through the winter months on separator skim-milk fresh from a hand separator, supplemented with a suitable grain and hay ration, followed by grazing during the past summer, and are now being finished

on grain. They will probably go to market about July 1, weighing close to 1,400 pounds.

In both of these experiments we have made gain on the calves during the first ninety days at a cost not exceeding 2½ cents a pound, crediting all grain feeds at prevailing market prices and the skim-milk at 15 cents per hundred. Good calves have during this time sold readily at 5 cents per pound; thus there has been a margin of 100 per cent. profit in these feeding operations at that age.

An indication of the high feeding value of milk is found in the excellent returns that result from its use in the feeding ration. "Armsby's Manual of Cattle Feeding" records an experiment conducted by Wolf in which one pound of gain was made on calves three weeks of age from each .97 pounds of dry matter in the ration consumed. This was made from whole milk with cream added, while in our experiment at Ames we have made a pound of gain during the first ninety days from each 1.78 pounds of dry matter in the ration, consisting of skim-milk, hay and oats. Ordinarily it takes eleven to twelve pounds of grain and hay to make one pound of gain on fattening steers. The nutrients contained in skim-milk fed in good condition are almost wholly digestible. Why is it, then, that so many scrawny, worthless calves follow in the wake of the creamery separator? It may be confidently affirmed that this result is in no sense due to any inferiority of skim-milk as a feed, as is sometimes held, but only to lack of observance of right methods in feeding. Skim-milk is not of itself a perfect ration. The separator robs it of one important nutrient—fat. Fortunately, however, fat, or a good substitute (carbohydrates) is the most abundant nutrient in nearly all of our farm feed stuffs. All we have to do, then, is to supplement the skim-milk ration with grains comparatively rich in carbonaceous or fatty nutrients. Herein lies an important principle in economical and rational feeding. Whole milk, which will be conceded to be the natural and best food of the calf, has a nutritive ratio of about one part of flesh-forming nutrients, or protein, to four parts of fat-forming nutrients, or fat and sugar. This proportion is best adapted to the needs of the growing calf. When we put milk through the separator we remove the fat and leave the proportion of protein to the fat and carbohydrates one to two. We have changed nature's ration and left only half as much of an important nutritive element as it formerly contained. It is clearly manifest, then, that what is needed in this ration is not what is already most abundant, but what is lacking, viz., fat, or its equivalent in some form. When we feed oil meal with skim-milk we do not supply this deficiency, but only increase the albuminoids already found in excess. This results in a useless and expensive waste of protein, the dearest nutrient that enters into our feeding rations, and in addition compels the calf to subsist on a one-sided ration, which it cannot long do without injury. In the three distinct experiments covering this point at our station better results have been obtained from corn meal and flaxseed, and oat meal, in supplementing the skim-milk ration, than from oil meal. There is every reason why this should be so. The principle has both science and practice to sustain it.

But these are not the only considerations involved in this subject. The chief objection to the use of skim-milk in feeding calves lies in its very changeable condition. It is practically a perishable product. Sweet and sour milk alternately will kill any calf. And it is just as easy by injudicious feeding to kill calves on perfectly sweet and wholesome milk. In the pioneer days of dairying it was common expression that inferior calves had been knocked in the head with the churn dasher, but modern experience teaches that the churn dasher and the separator are too frequently charged with the consequences of ignorance and neglect on the part of the feeder. It is absolutely essential to have the milk in uniformly good condition. In all of our experiments we have fed it fresh from a hand separator at a temperature of 88° to 90°; and without recognizing any separator fight or expressing any preference for machines, I want to take this opportunity of saying that, in my judgment, the farm separator has come to stay. A system that has as much merit must sooner or later prevail. The farm separator will double the value of skim-milk over the creamery separator, under prevailing conditions. On the college farm the introduction of the hand separator and the substitution of skim-milk for whole milk in calf feeding resulted in a monthly saving of from \$25 to \$40 in

a herd of forty cows, and the calves raised compare favorably with the best that can be raised by any method.

There are many other important considerations to be observed in utilizing skim-milk for the best results in calf feeding. The first lesson to be learned is moderate feeding. It is far more dangerous to overfeed than to underfeed. Many calves never recover from the derangement of digestion and backset that results from the mistaken kindness of giving two feeds instead of one. It is best to feed frequently and in small quantities. We seldom give over three or four pounds of milk in one feed at the beginning, and increase very gradually. Let all the details of feeding be performed with absolute regularity, and provide clean quarters, sunlight and good air, with as much care as the feed. My reason for urging this subject upon the attention of the members of this convention is that the application of the same intelligence and skill in utilizing the by-products of the creamery that have been brought to bear on the technical creamery problems will result in the creation of products scarcely less in value, directly and indirectly, than the output of the creameries. Any creamery or dairy system that fails to take this into account will soon be forced to give way to a better one.

Dairy Notes.

All intelligent butter-makers have admitted the fact that a reliable thermometer is the most important machine in the factory. It is the guide to gilt-edge butter-making.

The hot sun is the young calf's worst enemy. They are young and tender and the hot sun is too much for them. Better calves will be raised if they are kept inside altogether.

Butter merchants who make a specialty of handling storage butter say that it requires two weeks at least after the cows are turned into the pasture before the butter is good enough to put away. Fresh grass butter is soft bodied and slushy.

The term bacteria in reference to milk and cream does not mean a disease of some kind, as many suppose. It is simply a term used in specifying the changes necessary in the manufacture of butter and different kinds of cheese. By some it is commonly called seeding for the growth of the desired flavor.

It is a well known fact that the comfort of any animal has a great influence on its general health and thrift. Comfort in summer is as important as comfort in winter. The animal that must hunt almost night and day for a scanty supply of food, that is exposed to the burning sun and tormented by flies cannot be said to be enjoying summer comfort.

We learn from high market authority that the use of parchment paper is to be more general this year than ever before. In all the large markets parchment lining is required now. If for no other reason the added neatness which parchment paper gives a butter tub would make it popular. But it does all that is claimed for it and the demand for its use will continue to grow.

To specially illustrate the value of the right kind of feeding, President Mathieson of the South Dakota State Dairy Association, makes the following statement which came under his observation: A neighbor of his who has a herd of fifty common cows of mixed breeds, but one who is a careful feeder, received in cash from the Lansing creamery last year \$50 per cow for milk delivered.

Grandfather's way of dairying made him a prosperous man. His methods are not likely to make you a prosperous man in this age. 'Tis because the world

'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. Salesmen 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.

do move. Competition is keener, cost of production must be reduced, a better article is demanded. The pushing, up-to-date dairyman is doing his work in an easier way, he is doing more of it and in less time, he is feeding less cream to his pigs and calves, and not of least importance, he is making a finer grade of butter.

The harmless snake is a better friend of farmers than most of them imagine. It eats mice, moles, and just banquets on cut worms!



A Child Can Run It.

"My boy, aged seven years, runs the Mikado

Empire Cream Separator

with ease," writes C. L. Fairbanks, Springfield, Vt. Close skimming, small cost for repairs, and ease of cleaning are the qualities which commend them to all users.

All sizes for hand or power use at prices that will interest you. Agents wanted in territory where not represented. Ask for our 1898 catalogue.

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Farm Cream Separator.

Correspondence solicited.

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For Most Thorough Separation Excel all Others.

Massachusetts Agricultural College.

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We regard the Improved United States Separator as one of the best all-around machines. In cleanliness of skimming it surpasses all others. Our man calls it the smoothest running machine we have, although it has been in use three years—a good comment on its wearing qualities.

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Catalogues describing our Separators and a full line of dairy apparatus furnished free on application.

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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.

SICK COLT.—One of my neighbors has a sick colt and desires me to write you. When running on the wheat in the winter he staggered in walking as though he was weak. Of late he has to be helped up sometimes, especially if he has lain a good while. He shed off all right and has a good appetite and looks well. It is more difficult for him to get up when lying on left side. He has been given a little niter, also a little aconite. Nashville, Kas. J. A. C.

Answer.—Horses stagger and get weak from so many different causes, and your information is so indefinite, that I cannot make a diagnosis. Write again and give me all the facts you can get. Describe symptoms as accurately as you can, give time and manner of attack, duration of attack, etc. Has the colt been castrated?

HEAVES.—I have a horse, 14 years old, somewhat asthmatic and coughs, especially when trotted. I ran out of straw and fed alfalfa during the early spring. Being frequently wet it heated in his manger, and when I could find it dry it was a little dusty. His flanks showed difficulty in breathing. I have quit feeding hay and am feeding grass, more or less wilted, and he seems to be better in his breathing, but still coughs. I have and am using some pine tar in his feed-box and I think he does not dislike it. I fear it is heaves. The horse feels well and is in nice condition. R. W. S. Junction City, Kas.

Answer.—Your horse has heaves. See answer b under "dermatocoptes mange" in Kansas Farmer of May 5, 1898. Pine tar is antiseptic in nature and its use is perfectly proper.

CHRONIC NASAL CATARRH.—I have a six-year-old horse that runs very bad at the nose and his breath is very offensive. He ran out all winter with stock. Have been working him for two months. He is all right other ways. His breath is getting worse all of the time. Beverly, Kas. O. A.

Answer.—Treatment of this case will not be very satisfactory; you have neglected it too long. It is possible that a surgical operation may be necessary to expose the sinuses of the head for direct treatment, but this could only be done by a good surgeon. If you have no good veterinarian in your neighborhood you may try the following: Inject once daily by means of a one-ounce hard rubber syringe that is provided with a four-inch pipe a part of the following solution, viz.: Tannin, 1½ drachms; water, 1 quart. Use enough of this solution to thoroughly irrigate each nasal cavity. You must keep this up for weeks, uninterruptedly, if you expect any change for the better. Besides this treatment, work the animal moderately and provide pure water and easily digestible, laxative food.

LAME COW.—Last fall my cow became lame in her right hip. In March small lumps formed, broke, and discharged blood and matter. She is now getting over her lameness, but lumps as large as pigeons' eggs are breaking out all over her body. Is there any danger of other cows being similarly affected? Woodston, Kas. J. J.

Answer.—As soon as the small tumors become soft, indicating the presence of liquid, or pus, incise them with a sharp, clean knife; evacuate the contents by exerting pressure with the fingers, and then wash the cavities with a 5 per cent. carbolic acid solution. It is possible that these tumors are the seat of the larvae of the gad fly, oestrus bovis, or warbles. In that case simply squeeze them out and destroy them; this will cut off the supply of warbles for next year. Whether these tumors are real abscesses or simply warbles I cannot determine from what you write. By examining them you can, however, easily determine this for yourself. In either case there will be little or no danger of other cattle being affected from this one.

Potatoes that are kept in a very low temperature and in the dark, will not sprout.

Horse Owners! Use



Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes 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.

Ideal Mutton Sheep.

At the annual round-up of Michigan State Farmers' Institutes, held recently, Hon. Geo. McKerrrow, of Madison, Wis., spoke on the subject, "The Ideal Mutton Sheep."

Mr. McKerrrow is not an advocate of any particular breed for the general farmer. As a breeder, he has found it difficult enough to select a breed suited to his conditions and fancy. But it is not a question of fancy with the average farmer, but one of economy and production, and the production of a sheep suitable for the market.

If he could speak of the question from the standpoint of wool alone, the Merino would claim his attention; if for mutton alone, the Southdown; if for the profitable production of early lambs, the Dorset Horned; if for a large amount of mutton, some of the long-wools.

The ideal mutton sheep is one which not only produces mutton economically but carries its flesh where the most valuable cuts are found, namely, the loins, back and thighs. Such a sheep must be good in the top line, broad and thickly fleshed in the back and loins, and with full thighs. You cannot expect to produce the best quality of mutton on sheep with narrow backs and thin thighs.

Having secured a proper type of sheep for the production of mutton, the question of the best management becomes an important one. For the average farmer he did not advise the selection of pure-bred ewes, but rather the best grades. In the selection of stock sheep the farmer can afford to overlook many of the fancy points which would be important for the breeder of pure-bred sheep to take into consideration. He emphasized strongly the need of selecting sheep with vigorous constitutions. Short, strong neck, broad head, with good width between the eyes, a proud carriage, and a bright, pink skin all indicate a good constitution. While the fleece of a mutton sheep is of minor consideration, he said it should be bright and lustrous.

Mr. McKerrrow believes in feed cross as well as breed cross. All improved stock has been built up by careful feeding and management and you cannot expect to preserve this quality without continued good care. All the year around and not periodical good care was suggested. All changes of food, or other management, should be made gradually. As a general rule it pays well to dip sheep regularly; he believed the best time to be from a week to ten days after shearing.

Effect of Cultivation on Native Grasses.

Thomas A. Williams, of United States Department of Agriculture.

The various native grasses are very differently affected by cultivation. Some do not do well at all and soon die out, others are but little affected either way, while still others respond very quickly and improve almost at once. This last class includes the most valuable of the native species, such as big blue-stem, Western wheat grass, wild rye and prairie June grass.

The effect of loosening up the soil is very apparent in a field which has "gone back" and seeded itself to wheat grass or blue-stem. In many parts of Nebraska and the Dakotas three tons or more of hay is often cut from such fields. The fine growth which most grasses make along edges of cultivated fields is a sight familiar to all who have traveled over the Western prairies, and ought to be an object lesson to those to whom these same grasses are of so much importance.

The fact that cultivation improves the more desirable native grasses has been demonstrated by nearly every experiment station in the West and by a great many private parties as well.

An experiment made at the Kansas station in 1892 shows what a thorough stirring up of the soil will do for an upland prairie pasture. The experiment was made on a pasture in which the grasses had been dying out for some time and the weeds were beginning to

appear in abundance. It had been reduced to this condition by drought and overpasturing. The surface was thoroughly loosened up by driving a weighted disc harrow over the field in several directions. The pasture was sown to a mixture of orchard grass, meadow fescue, blue grass, timothy, red top, clover and alfalfa, which was harrowed in and a roller was driven over the field to level the surface and firm the ground. The seed germinated quickly and the tame grasses made an excellent start, but by September the wild grasses had crowded them out and held complete possession of the field.

In this case the stirring of the soil and the season's rest not only enabled the prairie grasses to recover and to overcome the weeds, but to crowd out a good stand of tame grasses as well.

This has been the experience in Nebraska and South Dakota where like attempts have been made to renew worn-out pastures. The tame grasses are undoubtedly valuable aids, since the harder of them will retain at least partial possession of portions of the pasture and add considerably to the forage obtained. Many of them, though they do not as a rule stand drought so well as the native species, start earlier in the spring or make a better growth in the fall, and thus lengthen the season during which the pasture may be used.

The continual trampling of the stock cannot help but pack the soil more or less, and consequently prevent its proper aeration. This packed condition also prevents the water from gaining ready entrance, and it runs off and is lost. This, too, when lack of moisture is perhaps the principal reason for the failure of the pasture. The old grass roots become crowded and die out or are weakened through lack of available food and suitable soil in which to develop.

It is very readily seen, then, why the treatment which was given to the pasture at the Kansas station produced such excellent results. The tearing up of the soil gave ready access to air and moisture, putting new life into the roots of the grasses which were cut up and separated by the disc harrow, so that thousands of new shoots sprang up immediately. The rest for one season gave these new plants time to get well established and form a new sod.

If this treatment is given before the pasture is too badly damaged, there is usually no need of sowing so much tame grass seed. There is little doubt that an occasional tearing up of this kind and a little care given to the time and manner of pasturing will get as much pasture from the native grasses as can be obtained from tame varieties under the same conditions.

Women and Patriotism.

Hospital and sanitary work will give employment to but an infinitesimal fraction of the patriotic American women. What shall the great majority of us do to help our country?

What if we should each resolve to keep the shadow of the war as far as may be out of our minds and houses and hearts?

Why? Because, for one reason, we women are more intemperate haters than men.

Those of us who were old enough during the Civil war to understand its effects upon the social life of the nation will remember that one of its worst results was the dull misery of our home life in the North and South. And this was due not so much to poverty, nor to anxiety, nor even to grief for the dead, as to the bitterness with which the women took up the quarrel. The home-staying wife and mother in Vermont or Georgia regarded her foes as monsters, and hated them accordingly. The non-combatant is always more vindictive than the man in the fight. The Yanks and the Johnny Rebs hallooed good-humoredly to each other across the picket-line, and managed many a time to exchange tobacco and news and jokes. When young Winthrop made his last mad charge, a cheer of admiration broke from the ranks of the Confederates, and

Grant himself acknowledged Lee's distinction as a great soldier.

But the women at home found no redeeming quality in their enemies. Excitement and suspense, long continued, told on their nerves; they saw no hope for to-morrow nor pleasure in to-day, and resigned themselves to a permanent condition of misery and belligerency with a zeal which they felt did their country honor. Men who wore the blue and gray can meet now with hearty good-fellowship. It is among the women of the North and South—especially women of isolated, uneventful lives—that the old hate and distrust still linger, and like snakes left from the drained swamps in the fair meadow, occasionally thrust up their ugly heads to sting and poison.

Another war is upon us now. The cause, let us agree, is holy and righteous. Let us send our medicines and money and prayers; hang out the flag and sing the "Star-spangled Banner," but keep the temper and venom of the war out of our own lives.—Rebecca Harding Davis, in Harper's Bazar.

All campaigning cannot be against Spaniards; bugs, weeds, bunco agents and other pests must be fought.

When there is really too much production in the world want will be dead, and ungratified appetite unknown.

Improvement in Pure Water Troughs.

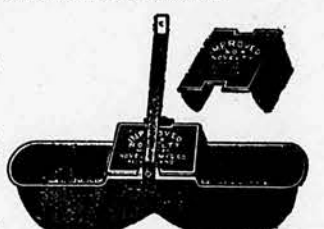
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Z. T. BLACKWELL, M. D.,
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CHLORO-NAPHTHOLEUM

KNOCKED IT OUT
In the First Round.
Microbes are responsible for lots of misery. They cause the
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CHICKEN ROUP,
SHEEP SCAB and
FOOT ROT.

Chloro-Naptholeum

PUTS MICROBES TO SLEEP
so they will never wake up. Will heal sores and bruises quickly. We have direct branches in the principal cities of the U. S. from whence goods are shipped. We will send you a sample gallon, freight prepaid, \$1.50. Agency is worth having. Write for full particulars. WEST DISINFECTING CO., 208½ E. 57th St., New York.

HOGS WONT DIE

of the dreaded cholera if they are given the proper antiseptic treatment. Put the medicine in their food, in their drink and in their wallow or bath. Sprinkle it about the pens, sheds, feeding grounds, etc. What is it? Why

ZENOLEUM

Being absolutely non-poisonous it may be given internally with perfect safety. Expels all sorts of stomach and intestinal worms; renovates and purifies the system and promotes the general health. Circulars, prices and directions free.

ZENNER-RAYMOND DISINFECTANT CO.
36 Atwater St., Detroit, Mich.

Richardson Drug Co., Agents, Omaha, Neb.

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

PASTEUR VACCINE CO., 52 Fifth Avenue, CHICAGO.

MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, June 6.—Cattle—Receipts since Saturday, 2,700; calves, 57; shipped Saturday, 184 cattle; 134 calves. The market was strong and active with some sales higher. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price.	No.	Ave. Price.
23.....	1,229 \$4.80	13.....	1,338 \$4.75
71.....	1,011 4.65	81.....	1,040 4.50
2.....	1,300 4.40	8.....	1,083 4.25
1.....	970 4.00	3 mix.	1,280 3.90

WESTERN STEERS.

No.	Ave. Price.	No.	Ave. Price.
21.....	1,302 \$4.65	33.....	1,142 \$4.50
14.....	1,012 4.45	10.....	1,070 4.40
1.....	1,160 4.25	42.....	1,067 4.15
1.....	1,000 4.00		

NATIVE HEIFERS.

No.	Ave. Price.	No.	Ave. Price.
22.....	718 \$4.70	4.....	802 \$4.65
11.....	558 4.55	69.....	792 4.50
80.....	832 4.35	16.....	750 4.25
7.....	630 4.10	1.....	580 4.00

NATIVE COWS.

No.	Ave. Price.	No.	Ave. Price.
17 c&h.....	892 \$4.25	1.....	1,170 \$4.00
6.....	1,181 3.75	2.....	1,131 3.50
2.....	1,000 3.25	1.....	1,010 3.00
2.....	900 2.50	1.....	690 2.20

NATIVE FEEDERS.

No.	Ave. Price.	No.	Ave. Price.
4.....	990 \$4.60	1.....	1,050 \$4.55
1.....	1,140 4.25		

NATIVE STOCKERS.

No.	Ave. Price.	No.	Ave. Price.
70.....	529 \$5.10	5.....	470 \$5.00
9.....	785 4.70	6.....	793 4.60
2.....	680 4.40	6.....	528 4.00
1.....	540 3.75	1.....	890 3.50

Hogs—Receipts since Saturday, 7,575; shipped Saturday, 1,917. The market was 5 to 10c lower. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
63.....	295 \$4.05	72.....	237 \$4.05	61.....	302 \$4.05
59.....	351 4.05	72.....	255 4.00	56.....	287 4.00
57.....	262 3.97 1/2	48.....	331 3.97 1/2	70.....	238 3.97 1/2
61.....	249 3.95	61.....	301 3.95	65.....	248 3.95
78.....	216 3.92 1/2	67.....	237 3.92 1/2	89.....	176 3.92 1/2
81.....	210 3.90	43.....	286 3.90	65.....	235 3.90
90.....	210 3.87 1/2	71.....	216 3.87 1/2	69.....	232 3.87 1/2
75.....	200 3.85	64.....	223 3.85	73.....	230 3.85
76.....	191 3.82 1/2	64.....	192 3.82 1/2	94.....	185 3.82 1/2
73.....	220 3.80	102.....	157 3.80	133.....	215 3.80
106.....	156 3.75	15.....	173 3.75	227.....	158 3.72 1/2
33.....	152 3.70	2.....	515 3.65	20.....	142 3.60
21.....	140 3.55	63.....	165 3.55	72.....	157 3.50
17.....	143 3.45	8.....	133 3.45	2.....	480 3.40
13.....	132 3.40	60.....	139 3.40	10.....	111 3.35
4.....	112 3.25	1.....	580 3.25	10.....	104 3.15
1.....	210 3.15	2.....	430 3.10	1.....	280 3.00
29.....	107 3.00	1.....	175 3.00	43.....	87 2.00

Sheep—Receipts since Saturday, —; shipped Saturday, 292. The market was active and strong. The following are representative sales:

No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
1073 Col. lbs.	73 \$5.90	49 spz. lbs.	65 \$5.50		
1 spz. lb.	63 5.25	469 Ariz. lbs.	88 4.00		
218 Id. Tsh.	102 4.55	91 sw.	95 4.35		
331 T. clip.	83 4.10	9 native.	81 4.00		

Horses and Mules—The feeling this morning was firm at last week's decline. The mule trade is stronger, owing to the fact that several new buyers are here with open orders for mules 15 1/2 hands up.

Chicago Live Stock.

CHICAGO, June 6.—Cattle—Receipts, 14,000; market steady to 10c higher; beefs, \$4.00@4.25; cows and heifers, \$2.40@4.65; Texas steers, \$3.75@4.40; stockers and feeders, \$4.00@4.25.

Hogs—Receipts, 32,000; market fairly active, 5 to 10c lower; light, \$3.85@4.20; mixed, \$4.00@4.20; heavy, \$3.95@4.32 1/2; rough, \$3.95@4.05.

Sheep—Receipts, 16,000; market steady; native, \$3.40@4.65; western, \$4.10@4.60; lambs, \$4.25@4.25.

St. Louis Live Stock.

ST. LOUIS, June 6.—Cattle—Receipts, 2,200; market strong; native shipping steers, \$4.35@5.10; light and dressed beef and butcher steers, \$4.25@4.80; stockers and feeders, \$3.60@4.55; cows and heifers, \$2.00@4.70; Texas and Indian steers, \$3.10@4.10; cows and heifers, \$2.25@3.40.

Hogs—Receipts, 4,500; market 5c lower; yorkers, \$3.90@4.00; packers, \$3.90@4.15; butchers, \$4.10@4.20.

Sheep—Receipts, 3,500; market firm; native muttons, \$3.35@4.50; lambs, \$4.40@5.00.

Chicago Grain and Provisions.

	June 6.	Opened	High'st	Low'st	Closing
Wh't—June.....					1 08
July.....	90	90 1/2	88		88 1/2
Sept.....	76 1/2	77 1/2	75 1/2		76
Dec.....	75 1/2	75 1/2	74 1/2		74 1/2
Corn—June.....	31	31	31		31
July.....	32 1/2	32 1/2	31 1/2		31 1/2
Sept.....	33 1/2	33 1/2	32 1/2		32 1/2
Oats—June.....	24 1/2	24 1/2	24 1/2		24 1/2
July.....	24	24	23 1/2		23 1/2
Sept.....	21	21 1/2	20 1/2		20 1/2
Pork—June.....					10 35
July.....	10 50	10 55	10 27 1/2		10 35
Sept.....	10 70	10 72 1/2	10 45		10 50
Lard—June.....					5 95
July.....	6 00	6 02 1/2	5 95		5 95
Sept.....	6 07 1/2	6 12 1/2	6 05		6 05
Ribs—June.....					5 05
July.....	5 67 1/2	5 70	5 65 1/2		5 65
Sept.....	5 75	5 80	5 72 1/2		5 75

Kansas City Grain.

KANSAS CITY, June 6.—Wheat—Receipts here to-day were 99 cars; a week ago, holiday; a year ago, 13 cars. Sales by sample on track: Hard, No. 1, nominally 96@97; No. 2 hard, 94@96; No. 3 hard, 92@94 1/2; No. 4 hard, 90@93; rejected hard, 85 1/2c. Soft, No. 1 red, nominally 98c; No. 2 red, 98c; No. 3 red, 92@93c; No. 4 red, 90 1/2c; rejected red, nominally 86@90c. Spring, No. 2, 92@94c; No. 3 spring, 90@93 1/2c; rejected, 91c.

Corn—Receipts here to-day were 116 cars; a week ago, holiday; a year ago, 81 cars. Sales

by sample on track: Mixed, No. 2, 29@29 1/2c; No. 3, 29 1/2@29c; No. 4, 27c; rejected, nominally 26c. White, No. 2, 30@30 1/2c; No. 3 white, nominally 29@29 1/2c; No. 4 white, nominally 28c.

Oats—Receipts here to-day were 18 cars; a week ago, holiday; a year ago, 16 cars. Sales by sample on track: Mixed, No. 2, 27 1/2@28c; No. 3 mixed, nominally 26 1/2@27 1/2c; No. 4 mixed, nominally 25 1/2c. White, No. 2, 29 1/2c; No. 3 white, 29@29 1/2c; No. 4 white, nominally 28c. Rye—No. 2, 45c; No. 3, nominally 43c; No. 4, nominally 40c.

Hay—Receipts here to-day were 53 cars; a week ago, holiday; a year ago, 44 cars. Quotations are: Choice prairie, \$9.00; No. 1, \$8.00; No. 2, \$7.00; No. 3, \$6.00@6.50; choice timothy, \$9.00; No. 1, \$7.50@8.00; No. 2, \$6.50@7.00; clover and timothy, No. 1, \$6.50@7.00; No. 2, \$6.50; pure clover, \$6.00; packing \$3.50.

Kansas City Produce.

KANSAS CITY, June 6.—Butter—Extra fancy separator, 14 1/2c; firsts, 12c; dairy, 10 1/2@12c; store packed, 9 1/2c.

Eggs—Strictly fresh, 8c per doz. Poultry—Hens, 6c; broilers, 14c per lb.; roosters, 15c each; ducks, 6c; geese, 4c; hen turkeys, 6c; young toms, 5c; old toms, 5c; pigeons, 75c per doz.

Berries—Strawberries, home grown, 50c@1.50. Blackberries, Texas, fancy, \$1.00@1.50 per 24-box crate. Gooseberries, home grown, 75c@1.00 per crate.

Apples—Choice to fancy Ben Davis, \$3.00@3.25; Winesaps, \$3.50@4.00; Willow Twigs, \$3.50@4.00. In a small way apples are selling at 40c@60c per half bu.

Vegetables—Cauliflower, \$1.25 per doz. Asparagus, 10@15c per doz. Tomatoes, \$1.00 per 4-basket crate. Cucumbers, 25@35c per doz. Green peas, 50@65c per bu. Wax beans, 75c@1.00 per bu. Lettuce, home grown, 50c per bu. Onions, \$1.25 per bu. Beets, 25@40c per bu. Potatoes—New, Texas, \$1.00@1.10 per bu.; old northern stock, fancy, sacked, Burbanks, 70c@83c; choice to fancy mixed, bulk, 70c@75c; Minnesota and Dakota, bulk, 65@70c; Colorado stock, fancy, sacked, \$1.00@1.10; home grown, sacked, 40@50c. Sweet potatoes, 60@75c.

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157 ACRES 3 1/2 miles from Eldon, Mo., Price.....	\$3,500
115 ACRES 4 miles from Eldon, Mo., Price.....	\$2,000
120 ACRES 6 miles from Eldon, Mo., Price.....	\$2,000

These farms are O. K. and will bear inspection. Write me for full description of these farms, also description of central Missouri, and send full description of what you have to offer in first letter.

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Eldon, Miller County, Mo.

WANTED—NOW—Agents to sell Sash Locks and Door Holders. Sample Sash Lock free for 2-cent stamp. Immense; better than weights; burglar proof; \$10 a day. Write quick. Address BROHARD & CO., Dept. 108, Philadelphia, Pa.

THE STRAY LIST.

FOR WEEK ENDING MAY 26, 1898.

Franklin County—J. A. Davenport, Jr., Clerk.

COW—Taken up by G. M. Broyles, in Hayes tp. (P. O. Norwood), one red cow, dehorned, with white face and branded on left side W. L., under-clip on right ear; valued at \$22.

Bourbon County—H. Frankenburg, Clerk.

MARE—Taken up by John W. Fairman, in Scott tp., four miles east of Fort Scott, one gray mare, 14 1/2 hands high, about 8 years old; harness marks; valued at \$10.

HORSE—By same, one sorrel horse, 15 hands high, about 12 years old; white spots on right shoulder and on right jaw; valued at \$10.

Montgomery County—D. S. James, Clerk.

HEIFER—Taken up by B. S. Adams, in Rutland tp., on or about the first day of May, 1898, one black heifer, white line on back, crop and underbit in the left and slit in the right ear.

FOR WEEK ENDING JUNE 2, 1898.

Nemaha County—F. M. Hartman, Clerk.

MARE—Taken up by W. B. Henry, in Red Vermilion tp. (P. O. Corning), May 14, 1898, one brown mare, 2 years old, no marks or brands; valued at \$15.

HORSE—By same, one bay horse, 2 years old, white face, white left hind foot, white spots on right side and neck; valued at \$15.

Cherokee County—S. W. Swinney, Clerk.

MARE AND COLT—Taken up by F. E. Bennett, in Crawford tp., May 9, 1898, one chestnut sorrel mare, 13 years old, 14 hands high, white stripe in forehead and shod all around. Bay colored suckling colt. Valued at \$20.

Butler County—S. G. Pottle, Clerk.

COW—Taken up by H. H. Welbe, of Whitewater, on April 29, 1898, one old cow, thin in flesh, yellow color with darker head and belly, dehorned, straight bar across hips, no other marks or brands; valued at \$20.

FOR WEEK ENDING JUNE 9, 1898.

Pratt County—John Mawdsley, Clerk.

HORSE—Taken up by James Hicks, in Banner tp., April 14, 1898, one iron-gray horse, 5 years old, 15 hands high, weight 1,000 pounds, branded on right side of neck; valued at \$30.

MARE—By same, one bay mare, 4 years old, 14

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

hands high, weight 1,000 pounds, branded on right side of neck; valued at \$25.

Montgomery County—D. S. James, Clerk.

COW—Taken up by J. H. Bates, in Sycamore tp., May 6, 1898, one red cow, medium size, branded on right hip, underbit on left ear, dehorned, about 4 years old; valued at \$25.

Labette County—E. H. Hughes, Clerk.

MARE—Taken up by George Bengel, in Hackberry tp. (P. O. Bartlett), May 23, 1898, one medium sized brown mare, 8 years old, end of right ear split, collar and saddle marks; valued at \$20.

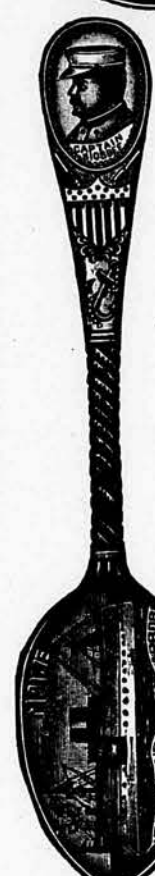
PONY—By same, one bay mare pony, 5 years old; valued at \$10.

MULE—By same, one brown mare mule, 3 years old, 14 hands high; valued at \$30.

MARE—Taken up by W. B. Salisbury, in Howard tp. (P. O. Valeda), April 9, 1898, one sorrel mare, 15 hands high, white hind legs half way up to hocks, blaze face, white on nose; valued at \$20.

Coffey County—Dan K. Swearingen, Clerk.

MARE—Taken up by J. S. Smith, in California tp. (P. O. Strawn), one sorrel mare, 3 years old, 15 hands high, white stripe in face, white on left hind foot, no marks or brands; valued at \$20.



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The Poultry Yard

KANSAS STATE POULTRY ASSOCIATION.
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A SURE CURE FOR GAPES IN CHICKENS.

With the exception of the fatal chicken cholera, there is no disease so disastrous to the interests of the rearer of chickens as the "gapes," popularly so called. This disease, common to many gallinaceous birds, as the domestic fowl, turkeys, partridges, pheasants, etc., is owing to the presence of a round worm (*Fasciola trachealis*) in the windpipe. The general form of this internal parasite is a bright red, wavy, cylindrical worm, one end forked with two unequal branches, at the other end tapering to a tail. The whole length is about one inch. The smaller branch terminates in a sucker by means of which the animal maintains its position in the trachea of the young bird, while the other branch, the real continuation of the body, terminates in the mouth. These worms, when existing in the windpipe of the young chicken in considerable numbers, produce first inflammation from their irritation, and if not removed, increasing in size, soon causing death from suffocation.

The parasite doubtless finds an entrance into the bird with its food or drink, most probably with the latter. In the case of strong birds, it is thrown off by the efforts of the birds, and it is only in the young or debilitated that it proves fatal.

We believe that death is almost invariably produced by suffocation. This being the case, the treatment is the same that we would employ in case of any choking animal, brute or human. Remove the worms and do it quickly. The best way in which to accomplish this is with a prepared feather. Take a stout wing feather about eight or ten inches long; pull all the vanes from both sides to within an inch of the tapering extremity; and the remaining vanes trim off until not more than one-sixteenth of an inch long, being careful not to cut the end of the feather, thus making a sharp point which may produce a fatal wound of the lungs. Having prepared the feather, we are now ready for the operation upon the bird.

The earlier this is performed the greater will be the prospect of success; and indeed, we can truthfully say that it is successful in almost 100 per cent. of all cases operated upon. The bird is taken gently by the body, the wings being held down to prevent struggling, and the legs drawn down and held between the knees of the operator, who is seated in a good light. When the bird's legs have been firmly closed between the knees, the left hand of the operator is slipped up to the head of the bird and the beak opened, when if the light is good, at the back of the mouth or pharynx, two passages will be seen, the one, the oesophagus, leading to the crop, and the windpipe, leading to the lungs. The windpipe is recognized by its anterior position, its rings, its transparency, and finally by the rapid closure of the upper end, the glottis, whenever the feather is brought near. Having now determined the location of the windpipe with certainty, take the feather and lubricate it with oil, and with the right hand slowly pass the small end down the throat until it is just above the opening of the windpipe which will for a minute be closed; but it will soon again open; then quickly push the feather down as far as it will go without using any force; twirl it around between the finger and thumb a few times and withdraw it. It is possible that a few worms may adhere to the end of the feather, and some may be seen within the mouth. But it is not necessary to remove them all in this way. They have been broken loose from their attachments; and, after a moment's rest, with a few refreshing inspirations, the gratified bird commences a series of sneezing operations, the result of which is to cast out the remaining parasites, and the cure is effected. It is not necessary often to repeat the operation on the same bird, and the disease, like those of children, is seldom repeated.

Some persons remove the worms with a looped horsehair; this is simply a waste of time. Others recommend Epsom salts, wine or Cayenne pepper to be mixed with their food; but our experience has been that all will fail except removal with the feather. Turkeys affected with gapes are to be treated as young chickens; but, if they are permitted to run wild in the fields the disease is unknown among them, and only appears when they are confined or

reared under a chicken hen. This cure is simple, and repays steady and practical application.—Prof. G. G. Groff, M. D., in National Baptist.

Confining Turkeys.

Owing to their wild disposition, it has long been known that turkeys cannot be reared in confinement, neither can they if range or yard be too limited. On many farms vermin destroy them and thieves carry them off, while some roam away and are never found, so that turkey-raising is often made unprofitable. To confine properly and still give room sufficient to keep them contented is not an easy matter, with the ordinary appliances on the farm. Still, if turkey-raising is to be made one of the permanent industries, it will pay to make proper preparations.

Two acres devoted to a turkey park, a substantial building situated thereon, will prove a profitable investment where turkey-raising is contemplated. For such an equipment a house 30 by 10 feet, divided into three apartments, each 10 by 10, the center one being open on the front, will be found most convenient, and will afford roosting room for a hundred or more turkeys during the growing season, and be sufficiently large for the breeders during the winter and spring. This house need not be expensive. It can be built of rough or planed lumber, and need not be more than 4 feet high at the eaves, with 6-foot front. The two end or roosting-rooms should be made tight and warm, and for this purpose they can be lined with some of the better grades of building paper. If the joists be 2 by 4, set sidewise, and the building-paper put on over them, it will leave a dead-air space of two inches, which will insure the building being comfortable. Such a house can be built for from \$20 to \$30, aside from the labor.

To inclose two acres with a turkey-high-and-tight fence might seem to some like a pretty costly undertaking, but this is not the case. A good fence, that will keep in turkeys, can be made in this manner: Set posts so that they will stand 6 or 6½ feet above ground, 8 feet apart, and to these nail 6-inch fence boards for the bottom; attach to this 2-inch-mesh wire netting 2 feet wide, and above this a 3-foot netting of 3-inch mesh. Join them together at intervals with common small wire, thus making a fence 5 feet 6 inches high. Over the tops of the posts stretch a length of barbed or cable wire, which will be 6 or 12 inches above the netting, according to the height of the posts, and wire the netting to this cable so as to take up all sag. This makes a fence practically 6 or 6½ feet high, so close at the bottom that young turkeys cannot get through it, and one that will keep out every class of vermin except hawks. I prefer this cable wire to a top-board because the fowls do not see it so plainly, and are less apt to attempt to fly over it. If No. 18 wire netting is used, the fence will be very substantial and will last many years. To fence two acres in this manner will cost about \$50, and the entire plant—house and run—can be more than paid for in the saving on one year's hatch. It is much better than to allow the turkeys to roam.

The location of the turkey park should be such as to give them all the advantages usually secured on a free range. It should have plenty of shade and grass. The orchard, or a small grove, if it be in grass, is eminently adapted to this use, and the land will not then be entirely given up to the fowls.—L. E. Keyser, in Country Gentleman.

Good Fowls for Laying.

A noted writer on fowls says: "For laying hens select large, strong, healthy birds of the Leghorn varieties, with large, square bodies, without regard to fine points, such as pure white, flat earlobes, or very yellow legs, or combs with just five points, or plumage that is perfectly white in the white variety, or without a white speck in the brown. It is not that these points are any detriment to the health or the vigor of the birds, but the constitution has been too often sacrificed to them, which often results in a strain of enfeebled though handsome fowls. The Leghorns are acclimated American breeds, which originated from birds brought from the Mediterranean, and they have been improved in this country by circumstances that have given them a pre-eminent position for the farmer, when birds such as are above recommended are selected. Other breeds, or crosses from them, are much better than the Leghorns, or any of the smaller breeds. Chickens that are the result of a Dorking cock and Braham hens are large and mature

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much earlier than the other. Moreover, they are hardy, fleshy, tender, and fine flavored. Plymouth Rocks are a good table fowl, and are good to cross with the above.—Rocky Mountain Husbandman.

Quality Makes the Price.

Make it a point to have your poultry of the best quality before shipping to market. One who is not accustomed to visiting the large markets knows nothing of the enormous amount of inferior poultry that is sold, and which largely affects the prices; yet, there is always a demand for that which is good, and at a price above the regular quotations. The assorting of the carcasses before shipping also leads to better prices. Old roosters (which seldom sell at more than half price) should not be in the same boxes or barrels with better stock; and to ship poultry alive, and have roosters in the coop with fat hens is simply to lower the price of the hens, as the buyer will estimate the value by the presence of the inferior stock. In fact, never send any poultry to market unless in first-class condition, and under no circumstance ship the inferior with that which is better.

Turnips for Ducks.

Grow a crop of turnips for ducks, if you intend to raise a large number of ducks. On the large establishments, where hundreds of ducks are raised, the principal food for them is cooked turnips, with a small proportion of ground grain. No crop can be grown to better advantage than turnips, and in no way can turnips be grown so profitably as to feed them to ducks. Ducks and turnips are adjuncts to each other on the duck farms, for without turnips the ducks could not be made to lay so well.

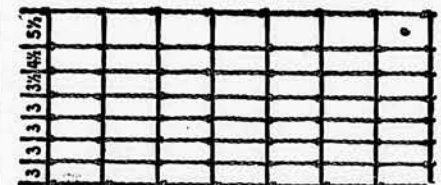
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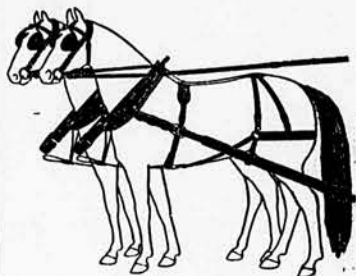
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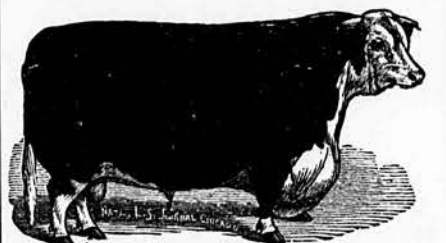
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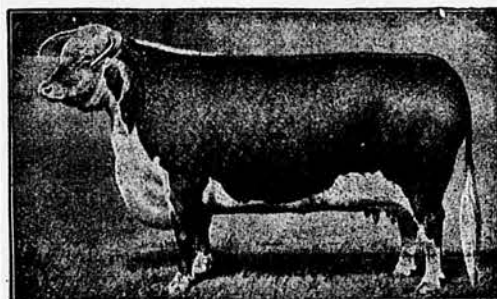
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Slaughtered in Kansas City	965,287	3,084,623	805,268	
Sold to feeders	665,615	341	151,389	
Sold to shippers	216,771	263,592	91,576	
Total Sold in Kansas City 1897	1,847,673	3,348,556	1,048,233	

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