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Agricultural Matters.

OAK GRANGE FARMERS' INSTITUTE.

Special Correspondence Kansas Farmer.

Once a year the farmers of Mission township, Shawnee county, have been in the habit of gathering in Oak Grange hall, to discuss questions relating to farming and kindred branches. The interest has grown with the seasons, and every year shows a marked increase in attendance and interest. There are no more intelligent farmers in Kansas than those connected with Oak Grange. They are well up in the theories of the noblest callings, and their thrift is manifest on every hand as one drives past well-cultivated farms, provided with all the modern conveniences for performing their labor, ample buildings for stock, and well-arranged and constructed houses for their homes. The past years have been trying ones for farmers, but we venture the assertion, that these people feel the financial stringency less than any in the State. The hall in which these meetings are held is the property of Oak Grange. It is a large, two-story building, finished throughout, and provided with kitchen and range, well lighted, furnished and heated. The grounds are adorned with groves of trees, and are surrounded with a neat fence. In keeping with all of these is the ample sheds which have been built for the shelter of the horses. The hall is the general rendezvous of the community. The Grange, the institute, on Sunday, the Sunday school and preaching service, at other times, literary and social gatherings. We talk of an all-purpose horse and an all-purpose cow, but these people have an all-purpose hall. I have given this description that other neighborhoods may see how convenient such a building is, and be induced to go and do as the Mission Centre people have done. Such a building is worth all it cost to a community.

The institute was called to order Friday evening, and Capt. White was chosen chairman. The choir entertained the visitors with a piece of music, rendered in an excellent manner. The first paper was "Silo and Easilage," by John B. Sims. This was a presentation of the subject worthy of the gentleman who prepared it. It will be printed in KANSAS FARMER in due time.

The discussion of this subject showed the attention this subject is attracting.

The paper by Mr. E. M. Cochrell, on "Public Roads" was one of much interest.

Hon. Bradford Miller read a paper on "Corn Culture." In it he showed the

commercial value of this great cereal, that the acreage is growing wider and wider every year. This paper will be printed soon.

FRIDAY MORNING.

Mr. A. H. Buckman read a paper on "The Orchard." This paper, by one of the most practical orchardists, was an able one. Extracts from it are printed in KANSAS FARMER this week.

John McDonald, editor *Western School Journal*, was introduced and spoke on "County School Taxation." He showed the irregularities of the present district system. The figures he gave opened the eyes of the audience to behold the inequalities and injustice of the system. The remedy is county taxation and an equal distribution of the funds to the districts. The address was thoroughly discussed, and a committee appointed to urge the passage of the bill pending in the Legislature. The Institute, by unanimous rising vote, endorsed the views presented in the address. It will appear some time in KANSAS FARMER.

Judge W. A. Peffer, editor KANSAS FARMER delivered an able address on Assessment and Taxation. He explained personal, State and national taxation. He sketched, graphically, the systems of taxation among the ancients. He paid his respects to the Legislature. He arraigned it for their profligate waste of money in the employment of clerks who do nothing but draw their salaries; for their refusal to give farmers the promised relief from unjust laws relating to interest. State and county officers get too much pay for the work performed. There must and will be a reduction.

The institute took a recess until 1:30, during which time an elegant dinner was served by the ladies in the hall, and more than 125 persons were seated at the tables.

The meeting was called to order at 1:30. The glee club enlivened the meeting with some fine music—Miss Clark at the organ. The subject of Judge Peffer's address was taken up for discussion.

"Culture of Wheat," was then presented by Thos. Buckman. He believed that if corn is king, wheat should be crowned queen. It is the most valuable commercial cereal. The fault with many who sow wheat is that they make it a scape-goat for other crops. Wheat should follow other crops. He raised wheat every year for seventeen years; average crop twenty bushels, and the average price received was 97 cents. Corn averages twenty-five bushels an acre, and the price has averaged 23 or 24 cents. Farmers ought to raise wheat for family use, instead of buying fifty pounds at a time at the store. There is no foundation for the belief that wheat culture produces chinch bugs. It is indeed a favorite food with them. It is green when they come out in the spring, hence it is the first thing they attack. If no wheat is sown, they select the next best thing—oats, rye, timothy, and even the prairie grass. They never molest clover. Besides the chinch bug, there are other enemies, notably the Hessian fly and the weevil. These have at times been very destructive in States east, but not to a very great extent in Kansas. The great east danger to the wheat crop is in the dry, cold weather, when the winds blow the soil from the roots. Bradford Miller agreed with Mr. Buckner in theory and experience. He raised wheat for his own use and some for market. It made him sad to see farmers buying the flour they ought to raise. Mr. Knapp said after three or four years trial he had been unable to reach ten bushels to the acre, and asked if he should continue to raise wheat. Mr. Buckman said the soil was prob-

ably not adapted to wheat, and he would advise some other crop instead. Capt. White had raised wheat for the past twenty years, and had made more money out of it than out of corn. Sow the first of September on well-prepared ground, and nine years out of ten, ample returns well be received. Mr. Spreng had never had an entire failure. Believed wheat on light ground should be rolled. Mr. Buckman said the objection to rolling was that the ground was made too smooth and the wind had full sweep on the plants and either injured or killed them. He believed in harrowing in the spring.

"Why we should Improve and Beautify our Homes"—a paper read by Miss Anna L. Cobbs. Her reasons were set forth in a well-written article, which will be printed in KANSAS FARMER before many weeks pass.

"The All-purpose Horse." Mr. D. I. Furbert treated this subject in a fresh and original manner. He described the different breeds of horses, and cited many bits of interesting history. His picture of the all-purpose horse was an excellent one. The horse, he said, is next to the human, and requires kind treatment. His senses are keen and his instincts strong. He responds to kind treatment when he will to noother. He should be, for this class, strongly built, with broad, deep arms in the legs, straight back, straight foreleg, fifteen hands one inch in height, large girth, short back, and have good action, and should weigh 1,000 or 1,100 pounds.

EVENING SESSION.

At 7:30 the meeting was again called to order. The Glee club sang; Mrs. Sims at the organ. William Clark recited "Five Thanks for What?"

"Dairying for Butter." Mr. T. G. Madison read this excellent paper. The thoughts embody the experience of a lifetime. It will appear in KANSAS FARMER in due time.

"Does the Farm pay?" This was a paper by Mr. P. J. Spreng. The paper did not solve the problem, but suggested some of the elements that enter into successful farming. We may only hope to succeed as we exercise vigilance, personal forethought, industry, frugality, courage, patience, order and precision. To this add sound discretion and ready judgment, looking closely into every detail. The world must be fed, and those who contribute to the supply will do so with profit. The man makes the business. Nothing gives so much prestige to a man in a community as to have it known that he has succeeded. Trusts and monopolies are multiplying to the disadvantage of both producer and consumer. I recognize that it is not the want of money among us, but the lack of proper knowledge—how to earn, how to spend, and how to save. Amid disappointments and discouragements we have much to encourage us. Farming is the most honorable, most ancient and dignified of callings. On it all other industries converge. It is the basis of our national prosperity. The nation was wrested from Britain by yeomen fresh from their plows, led by the farmer of Mount Vernon.

"Every Woman Her Own Gardner," by Mrs. K. J. McCracken. Much has been done of late to broaden women's sphere, but little has been accomplished calculated to bring contentment. Success does not always crown brave effort, and defeat is hard to endure. Woman's necessities and ambitions are pushing out in all directions in this progressive age, and the humbler occupations are steadily overlooked. Mrs. Ellen Foster and Miss Willard are examples of women filling exalted positions with credit and honor. We cannot all attain to such heights, yet we

can fill with credit the humbler sphere, and win success as the result of painstaking perseverance, which is of more value. Educated hands are needed as well as educated heads, to solve the problems of life. Nine-tenths of our farmers claim to have no leisure for gardening. Then tables are unsupplied with palatable and healthful vegetables the garden produces. Has the wife or daughter more leisure than he? No. Too many of the daily cares of the household have become a dreary monotony, causing her to forget that "Who sweeps a room as by God's law, makes the action fine." Let her demand of the husband an acre of ground, instal a trusty Abigail in your kitchen, don your boy's best kids, and armed with the tools necessary, proceed to interview the outlook. With one season's acquaintance with nature you will find your ills have folded their tents like the Arabs, and silently stole away, leaving exhilaration of body and soul. Plant in the house, the last of February, in boxes, seeds for early planting—cabbage, tomatoes and celery. Transplant to the garden as soon as the weather permits. If it is noble for man till the soil it is not less so for a woman.

The fact that a bill had been introduced into the Legislature by our Senator and representatives, to enable Shawnee county to issue bonds to the amount of \$350,000, was mentioned by Hon. Bradford Miller, but such a proposition found no favor whatever; the meeting was unanimous in condemning the measure. Should the bill become a law it will find no support in this section at least.

The institute adjourned with a song by the Glee club.

The Origin of the Check-Rower.

A chain stretched across the field and anchored, to operate the mechanism of a corn-planter as drawn along, is an idea that was commonly known as far back as thirty-five years ago to those giving attention to planting machinery. But the experiments made with it did not reach beyond the simple rudiments, and without much promise of successful results, owing to the great expense of a chain suitable and other seemingly insurmountable difficulties. To the inventor of the Haworth Check-Rower, however, is due the credit of combining the elements that constitute the completed and practical machine which has been of such inestimable benefit to the corn producer of the West.

Geo. D. Haworth began experiments in the spring of 1867 with the idea of making check-row attachment for the corn-planter then in general use, first trying iron wire for a check line, jointed together so as to form knots at the proper intervals and run at the side of the machine. A movement to throw the slide-bar of the planter back and forth by the direct force of the check line being necessary for an attachment, the one first gotten up was substantially the same as those now in common use, namely, the forked retractile arm with pawl and ratchet wheel, spur wheel and pinion, so that with each stroke of the arm a half-revolution was made—thus, with a crank on the pinion, motion was communicated to the slide bar, but, on its becoming evident that iron wire was not durable enough, cotton rope was adopted as the best thing available at that time for the purpose, the use of which, however, made it necessary that mechanical devices be provided especially adapted as to the movement and to lay the rope over by the machine. After the trial of various plans, that embodied in the Haworth Check-Rower as now made was adopted as the best, and time has verified the correctness of that conclusion.

When Bessemer Steel Wire became available as a cheap and durable material it was substituted in place of rope.

This machine is unequalled in its perfect adaption to the use of a wire check line. Mr. Haworth was the first to devise the means whereby a forward and return movement was given to the dropper slides by the direct force of the knotted check line. This and other principles originated by him are common to all check-rowers.

The Haworth Check-Rower and Corn Planter, manufactured by Haworth & Sons, Decatur, Ill., are the outgrowth of thirty-five years experience in the invention, manufacture, introduction and use of planting machinery.

The Stock Interest.

DEHORNING.

By E. P. Webster, of Marysville, read before the second annual meeting of the Kansas Dairy Association, held in Topeka, February 6-7, 1899.

Should dairy cattle be dehorned? Yes; why not? I suppose the subject of dehorning is at the present time receiving as much attention as any subject pertaining to our stock industry. I have no doubt but there has been some bungling work done, and that there has been some very unfavorable reports circulated. But it is essentially true that those reports are either false or the fruits of imperfect work. Either the operator did not know where and how to cut, or he did not hold the subject in a proper manner to perform the operation. But I am thoroughly convinced that the loss report from dehorning has been greatly overdrawn.

It is hardly possible that an intelligent man at the present time needs any time or space to prove to him that dehorning pays; so I will speak mostly on the manner of performing the operation. I was very ignorant on the subject when I began to dehorn cattle. All I knew was that I wanted to rid my cattle of the miserable horns. I commenced as low as any one, and have studied up and practiced, until to-day it is a wonder to me how I ever dehorned so many cattle under such unfavorable circumstances. But such seemed to be the necessities of the case that I had to do it some way. As I always was very careful, I happened not to kill any animal up to this time, not one out of 30,000. I consider that very remarkable—almost a miracle. I have found that experience and some knowledge of cow anatomy is a great help, and the more experience the better. Some good common sense will do no hurt.

Before a man commences he should know what he wants to do, and how to do it, and the reasons why.

I believe in specialists as applied to dehorning, the same as any other profession, on the principle that the more a man does in a certain line the more expert he becomes. And the more he has to do the better instruments and appliances he can afford to have.

I cannot believe that Mr. Haaff's plan, "every man his own dehorner," is conducive to the best results. For this reason, that if every man bought his book and studied it and followed it, by the time he got his own cattle dehorned he would only then be a beginner. The consequence would be the cattle would all be dehorned by beginners, and in the nature of things, no one would be as well pleased in the end as though he had hired a specialist with all the improved appliances to come and do his work at 10 cents per head. I take this ground, and here I stand firm on the principle that no man can strike it right every time without practice. And then he must have some way to hold his subject, so that a good surgical operation can be performed, knowing just where to cut, then being able to do it as exact as a carpenter saws to the scribe, so that he may not only gain the maximum of speed, but reduce the pain to the minimum. Mr. Haaff, the great originator, has told the people that the horns can be removed, and fought it through on that line. But how to do it practically and satisfactorily has been left to your humble servant.

He says, cut down at the matrix. I take exceptions right at this point. Cut the bone off at the matrix or above it, and there we are very liable to have trouble as a result. In the first place, long, tedious sore, because the matrix

in trying to throw off a bony cap to cover the cavity, and the skin at the same time is trying to grow over it. And here an inflammation is set up by the contending forces of nature, which extend through nervous sympathy to all the adjoining structures. So, as a consequence, the animal's jaws will be sore, the sides of its neck will be sore, in short, all the muscles to which the fifth pair of nerves ramify will be sore.

But if the matrix be dissected out clean, there is no longer a cartilaginous ridge for the skin to raise up over. There is no attempt at bony growth, but the skin grows right over the wound in a healthy animal, at the rate of about an eighth of an inch daily, and heals over as smooth and with as little supuration as any common wound, until the flesh meets, and there is scarcely a scar left to mark the spot. Then in that case we have a perfectly symmetrical head instead of a broad, square-topped head with stubs on each side, which not only look ugly, but strengthen the skull and increase the tendency to butt a thing that otherwise never would be attempted. Another thing, cutting too far out results in excessive bleeding in some cases, because outside of the matrix the blood flows through bony channels and the saw does not stop them, but behind the matrix those blood vessels are in the flesh and the mangling tendency of the saw closes them. The saw should be so constructed that the horn can be taken off with the greatest ease and the fewest strokes, should be long enough to give a good natural-stroke motion to the arm. It should have a strong steel back, with handle set low, so that the cutting edge is on a line with the forearm, and wide enough between back and blade to allow it to curve out at the proper time, so as not to sever the vein that runs across the ear.

As for its being cruel, I say if the animal is properly held and the operation properly done, it is humane in the highest sense. There are many painful operations inflicted on our animals that are vastly more severe than dehorning, but such are the customs and necessities that we don't stop to ask whether or not they are painful. Dehorning will become as general as castration all over the world in time, and the people will become so used to muleys that horns won't be fashionable and won't look well. Then the cry of cruelty will have been forgotten. Painful or not, we should dehorn. Better hurt 20,000 cattle than to have one person killed. This reminds me that I dehorned a Jersey bull that had hooked a woman in the mouth, knocking out six front teeth and tearing her cheek open to the ear. Then there are other and minor reasons for dehorning. (1) The saving of a vast amount of loss in stock. (2) The saving of time and space in handling and housing. (3) The great saving of feed.

It has been said that dehorning would injure the milk and butter qualities of the cow and her progeny. That is something that has no foundation for argument. You might as well say that the dismemberment of a hoof or tail or an ear would affect the milk-producing functions. People ought to take a common sense view of such things. I can say that I have lived with dehorned cattle for four years, and I know that my cows never did nearly as well when they had horns as they have since dehorning.

Here are the words of Mr. Huse, of Manhattan: "I had Mr. Webster dehorn my cattle last April. My cows are Short-horns. If any difference, they give more milk than they did before. If I was milking a hundred cows I would dehorn them by all means. I

consider dehorning a great kindness. The Webster chute is the best."

Mr. I. N. Coard, Pawnee City, Neb., says: "Dehorning did not injure my cows in the least. It is the kindest act that can be performed in cattle."

Clarence F. Hunt, Superintendent of the dairy department of the Windsor farm, Denver, Colorado, says: "Dehorning is here to stay. We milk now one hundred cows, consisting of full-blood Holsteins, Jerseys and Swisses, and grades of all breeds. Since dehorning they have done better than before. Your chute is a grand success. Permit me to congratulate you on the invention of a machine of so great merit."

Alden E. True, of Paxico, says: "Dehorning did not injure the milk qualities of my cows in the least. I think dehorning cannot interfere in that direction. I regard dehorning as a great benefit to cattle-raisers and dealers. It is a kind of work that has a right way to be done, and I am sorry to say that there are many cattle that show conclusively that there is a wrong way."

H. M. Kirkpatrick, Exchange, Kansas City, says: "I am greatly pleased with the results. It did not interfere in the least with the milk. Of mine, some were fresh, some were strippers, some within a few days of calving. Some were pure-bred Holsteins and Jerseys. Not one lost a calf or a feed. It is a satisfaction now to see them feeding together like so many sheep; none fearing former bosses. The Webster chute is complete. Would not know how to dehorn without it. Your saw is a great improvement over Haaff's in length, strength of back and the way it is hung for the hand. Mr. Webster, I wish you much success while you are doing so great a work for the cattle-owner."

Various gentlemen, well qualified to form an intelligent opinion, have expressed themselves in explicit terms, signifying that dehorning has not and cannot injure the milking qualities of milch cows, while many have reported a considerable improvement. Personally, I do not consider the horns as having any bearing on the question. In my opinion, the improvement came from the fact of the cows becoming more docile, in consequence of being dehorned.

Governor Hoard's theory on the nervous temperament is unsupported by any facts.

The best age to dehorn cattle is from six months to a year old, and the time that I would advise is any time when there is no danger of being fly-blown. I never knew of cold weather producing any bad effect. Rich breeders who have specially fine herds may have good and valid reasons for not dehorning, and in that special domain I do not wish to be considered an aggressor.

National Swine-Breeders' Association.

The following circular letter to the swine-breeders of America, has just been issued by the Executive committee of the National Swine-Breeders' Association:

DEAR SIR:—The last annual meeting of the National Swine-Breeder's Association was one of unusual interest. The Executive committee is about publishing the papers read on that occasion by Prof. W. A. Henry, of the Wisconsin Experiment Station; Prof. J. W. Sanborn, of the Missouri Agricultural college, and J. W. Pierce, Esq., of Peru, Indiana, together with the discussions following each, also the other proceedings of the meeting in full.

The report will contain also a complete list of the members of the association to the date when the last pages go to press.

To each member will be sent, postpaid, a copy of the report as soon as issued.

The constitution of the association provides that any reputable breeder or feeder of swine, or any State swine-breeders' or swine record association, may be admitted to membership in this association by the payment of \$1. The annual dues of members are \$1 each.

The list of members has been growing steadily each year, and now with the brightest outlook before them that American breeders have had in many a year, there is no reason why they should not take new courage

and join hands in the National Association for mutual aid and instruction in the most approved methods of placing on the markets of the world the best pork products that intelligence and skill can supply.

If you are already a member but have not paid your annual dues, we hope you will remit and thus have your name retained on the list.

PHIL. M. SPRINGER, Secretary.

The Poultry Yard.

Chicken Jottings.

EDITOR KANSAS FARMER:—Have you got your fowl-houses all cleaned up, and your breeding-pens made up for spring? If you haven't it is indeed time. About nine hens to one male bird, is, I think, about right to obtain the best results. Two-year-old males should be mated to pullets and *vice versa*. They should have plenty of lime now, and the best thing in that line is old mortar pounded up; they will eat it like corn. To free the fowls from vermin place each fowl on paper and dust insect powder thoroughly in the feathers to the skin, and my word for it, vermin will leave for parts where insect powder is unknown. Practice scrupulous cleanliness. Lime is cheaper than rump, and fumigation more profitable. The early brooder's nest should be lined with heavy paper; some coal ashes in the bottom, with plenty of soft, fine hay to make a nice round nest, not very deep nor yet so shallow that the eggs will roll out. I think I hear you say, who don't know how to make a hen's nest. I have seen some folks who didn't. They would have the nest so shallow that they had to gather up the eggs from all over the hen-house floor twice or three times a day and put them under the hen that might be on or in the nest that she might likely go on when she got ready. Yet when only one or two chicks hatch from twenty-five or thirty eggs, they condemned the innocent old yellow hen.

I think the sitting hen that is allowed to go and come at will, especially the early ones, are liable to remain off duty too long, and allow her eggs to become chilled. Even if she don't conclude to go on a strike and quit, they are up to such capers as that. You should confine them to their nests and let them off every day to plenty of whole corn and water and the dust bath, and after fifteen minutes of exercise order them back to business, see that they go. The secrets of success with early-sitting hens consists in painstaking in little things, and a constant watchfulness against accidents. With such care and with fertile eggs large broods of strong, vigorous chickens can reasonably be expected.

MRS. EMMA BROSIUS.

Topeka, Kas.

An Extraordinary Phenomenon.

No other term than the above would apply to the woman who could see her youthful beauty fading away without a pang of regret. Many a woman becomes prematurely old and haggard because of functional derangement. What a pity that all such do not know that Dr. Pierce's Favorite Prescription will restore their organs to a normal state, and make them youthful and beautiful once more! For the ills to which the daughters of Eve are peculiarly liable the "Prescription" is a sovereign remedy. It is the only medicine sold by druggists under a positive guarantee from the manufacturers, that it will give satisfaction in every case, or money will be returned. See guarantee on bottle wrapper.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for Consumption. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. Address. Respectfully, T. A. SLOCUM, M. C., 181 Pearl St., N. Y.

In the Dairy.

THE FEEDING AND CARE OF DAIRY COWS.

By T. C. Murphy, of Thayer, read before the second annual meeting of the Kansas Dairy Association, at Topeka, February 5-7, 1889.

The proper place to begin the feeding and care of the dairy cow, is to begin with the calf. First, be certain the coming cow is of a dairy breed, has the true dairy form, then feed for bone and muscle; fat has no place in the dairy cow. We want to first consider well what kind of a dairy we will keep. Are you going to sell milk, or make butter? But as I am talking to Kansas farmers who are making butter on the farm, I will treat of feed for making butter. We usually have an abundance of good grass from the 1st of May until the 1st of July. By this I mean food to build up the animal's frame and supply a fair amount of cream, not grass enough to sustain life. Cows are usually milked for profit, or should be. I have found it pays well to give each cow a small amount of corn and oat meal during even the best part of the season. One quart of such meal twice a day makes a finer grade of butter, and the cows soon learn to come to their places at milking time. With heifers two years old I would not fail to give the small amount of feed named. Then for additional feed from August until frost, plant a small field of sweet corn or sorghum to feed during a dry spell. Look out for a scant pasture; don't fail to provide some kind of extra feed, for the cows that fail in their milk now will not readily respond again even with extra help, and fail they certainly will, during August. It is surprising the amount of green feed an acre of evergreen corn or care will produce. During early fall bran can be purchased at from \$8 to \$10 a ton, and four quarts of bran a day helps along in keeping up the flow of milk. Don't be afraid to furnish extra food to the dairy cow, for she will return it to you at a higher rate of interest than even Kansas Shylocks charge. Of course you will not fail to provide plenty of pure clean water in summer, well water, if you have no running stream. I believe the Kansas pond must go, at least for dairy cows. We must next consider, what about winter feed? In States where tame grass is king it is easy to answer that question, but here tame grass is not plenty, and if produced will not compare with the tame hay of the Eastern States, as a butter-producing food. Such at least is my experience. But we can produce a large crop of German millet any season, if the ground is well prepared and the crop put in early in May. Cut the millet as soon as in blossom; don't let it dry out in the swath, but put up in good-sized cocks and let it cure, haul to the barn, or stack when it is hay, or dried grass, not wait until it becomes woody fibre. Then cut up plenty of corn fodder when it is green and fresh, secure your feed in good order, have plenty and change often. With such feed we can produce good butter and of a good color. Cool, frosty nights have now come on, and of course you will provide some kind of shelter for your cows; failure to provide shelter means making butter at a loss. A failure, you become one of the many who say milking cows don't pay, though perhaps you keep a cow around a year to raise a cheap calf and call that stock-raising. The shelters need not be expensive or grand, but they must be comfortable, having a good manger and a separate feed-box for each cow. For our own use we are using the stanchion for the past four winters and feed from the floor. In this way the cows are

kept clean, no food is wasted and each cow receives her share of feed regular, and the cows are in place for the milker. Turn the cows into the yard pleasant days, clean up the stalls, put the feed in the manger while the cows are out. Should a storm or cold wind come up, return the cows to the stalls at once. I would not turn cows giving milk into a stalk field, because they fill up on a mass of crude, indigestible fibre, which occupies the stomach to the exclusion of butter-producing food and a loss in cream. You may do it; you may expose your cows to chilling storms, but you rob your own pocket every time. I would condemn the practice of allowing cows to drink ice water, better use well water, or try and use a tank heater another winter.

The grain ration I find best suited for a butter ration, is made up of one bushel of good oats, two bushels of shelled corn, ground fine together, then add one bushel of bran; mix well. Of this I feed to each cow three quarts twice a day. This grain ration is fed mostly to young cows. I find it is about right and at a cost per cow of less than 3 cents a day. The chemist tells me roller bran alone is good feed, but my pocket-book told me years ago, if fed alone it is poor feed for butter. Feed your cows well, all they return pay for, but not any to make 2-cent cow beef.

The care of the dairy cow: Keep in view if the cow is a mother, or will be one, with all the word means, the treatment must be of the best. The man or boy who can only kick and beat the cow must have no place on the dairy farm; better send him to the mule ranch. The young cow must be trained and handled before she calves. She should feel that her master is her friend, not her enemy. Don't break the heifer, train her when young and she will be easy to milk when she becomes a cow. About ten days before she is expected to calve, separate her from the balance of the herd, at least at night, give her a comfortable pen alone. Watch the udder; should it become full and show any signs of becoming hard use gentle friction with warm grease, or long-continued bathing with warm water, gently draw the milk. Should the udder become cracked, don't allow the calf to suck. Should garget begin to develop, I have found tablespoonful doses of potass. nitrate given twice a day in water to be efficient. But should you fail in removing it the fluid extract of poke root should have a trial. After the udder becomes soft and pliable then the cow may take her place in the milking barn, to be well fed and watered, with good sweet food and clean water. She must be milked regular and well stripped out. How long should the cow go dry? That depends on her persistence as a milker. If she is a first-class cow she may show no indication to go dry, in fact can't be forced dry; if so, add an extra allowance of oats to her ration and milk right along up to calving. Six weeks rest should be long enough for any cow to go dry.

When dry, care for her well, and not turn her out on the warm side of a wire fence and then wonder why dairying don't pay. I do not offer this as an all-wise experience, but within the past eighteen years I have picked up some experience, a part of it cost me something. I fully believe the development of the dairy will be the best help the Kansas farmer can obtain. The dairy cow will pay the mortgage. There is no use of wasting words telling you Kansas farmers about the dirty mud-hole some of you keep for your cows to drink from. Many of you are guilty and you know it. Neither shall I advise you to keep the dog away from the

cows. Don't keep a dog. If you have one or two give them away at once. Treat the dairy queen well, for she is a royal queen.

The Relation of Creamists to Their Patrons.

By J. E. Nissley, of Belle Springs, and read before the second annual meeting of the Kansas Dairy Association, held in Topeka, February 5-7, 1889.

FELLOW MEMBERS:—Several weeks ago I received a program for this meeting from our worthy Assistant Secretary, Mr. Horace J. Newberry, and in looking over it, found my name placed in connection with this subject—"The Relation of Creamists to Their Patrons."

Since then I have somewhat drawn my attention in this direction, and reviewed the existing relations between my patrons, and the more I reviewed the less I thought it was necessary, as there is not a day, my fellow creamerymen, but what there is some occurrence, some peculiar circumstance by which we are brought into more direct communication and closer relationship with our patrons, provided we choose to have it so; and certainly it is as necessary to study that observance and relationship as it is to study our own welfare.

I am sorry to acknowledge, but believe it to be true, that there is not as mutual a feeling between the creamist and his patrons to-day in Kansas as there should be.

And why? Well, there are several reasons. One is, that the creamist is suspected by the patron to be a "shark," a "snake in the grass," one who is striving to live only to the height of his own gratification, regardless of the well-being of those about him; and I have no doubt they are justified nine times out of ten for thinking so.

Another reason is, that the patron is suspected by the creamist to be, as the slang phrase has it, "onto" all the little tricks which he is prone to fall heir to; indifferent as to the care of his stock, handling of his milk, considering it drudgery and not a duty elevating and refining; and pardon me, but I sincerely believe the creamist is justified eleven times out of ten for thinking so.

I tell you as long as this antagonistic feeling exists between the creamist and his patrons, just so long will the creamery business in Kansas be practically a failure.

There should be a more harmonious feeling or relation between the two; what is to the interest of one, most undoubtedly is, or at least ought to be also that of the other.

Like a client who depends chiefly upon his attorney for advice, so should the patron look to the creamist for much valuable information; in fact, they can consult with one another, for instance, concerning the advisability of feeds, and what effect certain feeds have upon milk and butter, and also consider the care of milk, so as to keep it in a perfectly healthy condition, thereby increasing the tendency of a better and finer-flavored article; and in the end to be profitably rewarded for the observance of a few simple little things, such as are daily passed by unseen, while the golden opportunity to take advantage of them is steadily moving on.

The relation between the creamist and his patrons should be mutual, each placing confidence in the other and working for one common interest. Look at the inconsistency of it being otherwise, yet we find this self-same inconsistency all around us.

Fellow creamerymen, I fear we do not fully realize the importance of our several positions. Do we not too generally sit upon the "stool of ease and contentment," and console ourselves

WELLS, RICHARDSON & CO'S

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Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. Three sizes, 25c. 50c. \$1.00. For sale everywhere. WELLS, RICHARDSON & CO. Burlington, Vt.

by the thought that our patrons will bring the milk and cream to our door, day after day, during the blizzards of winter and scorching heat of summer, and barely recognized by us even when they do come to the factory?

Come, we must wake up to a sense of duty, make ourselves known, and let our voices be heard. If possible, the creamist should see his patrons every morning as they make their delivery; if convenient, have short interviews with them; advise as to the latest market reports, etc., etc.; distribute dairy literature; the sum total of which will in a general way encourage them, and in an incredibly short time you will be surprised to see that your patrons are looming up, greeting you with a smile instead of a frown and grumbling, while a hearty co-operation exists, with pleasant and beneficial relations the result.

Still another relationship that comes sorrowfully to our notice. There have been for the last few years, and are yet, a large number of men, creamists we will call them, scouring the State of Kansas in the interest of some gigantic corporation, to induce farmers in certain localities to form associations and build creameries.

To explain their "modus operandi" would only be a waste of time, as I have no doubt that most of you have heard of them, and some, perhaps, more especially fell prey to their all-devouring clutches.

But I only wish to call the attention of this meeting to the gross injustices that have been wrought upon our farmers at their hands. To illustrate more fully, down in my county (Dickinson), I venture to say that the farmers of several localities have suffered to the amount of no less than \$15,000 by these "silver-tongue" creamists; and I hope that before this meeting closes, it will take some steps in some form or other to help quench this—dare I say outrage? How can we afford to have all this capital taken out of the State? We need it to improve our farms, to improve our stock, to release that branded curse, the mortgage.

Brother creamerymen, our business demands it, our position demands it, our relations to our patrons demand that we give this our attention.

What we want is less \$7,000 creamery buildings, less fabulous prices, less creamery experts, and more \$3,000 creamery buildings, a more substantial basis to calculate from, and more practical dairy men; then, and not until then, in my estimation, will the relations between the creamist and his patrons be satisfactory, and the creamery business in Kansas be practically a success.

Cleanse the scalp from scurf and dandruff; keep the hair soft and of a natural color by use of Hall's Vegetable Sicilian Hair Renewer.

Correspondence.

The Interest Rates.

EDITOR KANSAS FARMER:—The proposition to reduce the interest rates in this State has created quite a commotion as witness the very general range of discussion of the subject, and the farmers are taking a lively interest and an earnest part in the discussion. The participants on both sides of the question carry the argument to extremes, and consequently the agitation over the matter is far greater than the importance of question demands. The proposed reduction being only 1 and 2 per cent., or from 7 the legal and 12 the allowable rate, to 6 and 10 per cent., the change is not of sufficient moment to either borrower or lender to warrant the excitement that its suggestion has caused. The farmer will not suffer much from the burden of the extra 1 and 2 per cent. he now pays over the proposed rates, probably not as much as he might from a scarcity of money should foreign capital be withdrawn from the State in consequence of a reduction, or the change in the redemption and other laws effecting securities. On the other hand, the slight reduction in rates alone, would hardly cause the withdrawal of money from the State. The proposed change in the redemption laws would be more likely to drive out capital I believe, consequently gives greater cause for solicitude than the change in rates of interest; for nine capitalists out of ten would rather invest their money at 6 per cent. where the redemption and other laws effecting their mortgages were favorable to them, than to loan it at 7 per cent. with these laws opposed to their interests. But in view of the very general demand and necessity for borrowed capital throughout the State, and of the largely undeveloped resources and possibilities of many parts of it, the agitation of these questions seem to me untimely and illadvised. It is bad policy for a lame man to throw away his crutches before he is sure he can walk; or, again in the words of that hackneyed maxim, to swap horses in the middle of the stream. The farmer naturally feels burdened by the rates of interest he pays, and justly feels imposed upon in this matter in the seemingly exorbitant rates charged; but he must expect to pay rates commensurate with the demand for money, and there can hardly be said to be any disproportion in this matter, for borrowing is the universally practiced custom, not only with farmers, but among almost every class and condition of people in the State. What then is his remedy? The farmer must be his own savior in this matter! How? By overcoming as fast as possible the necessity for borrowing. How can this be accomplished? By resort to every means and measure that will help to increase the income and profit of his farm and the reduction of his operating expenses. By care in selecting for cultivation the best paying crops, by better methods of cultivation, by breeding and growing only the best kinds of stock, by economy in buying farm implements, tools and wagons, and care in their use; in seeking the best markets for his productions, and by the practice of the same foresight, care and attention to details that the business man puts forth in his calling. Farming is a business, and the farm should be operated on strict business principles if the highest success is desired. If our Kansas farmers exercised the same judgment, industry and economy which those of the far east find necessary in the management of their farms, they would, on this wonderfully rich soil of ours, become in a few years absolutely independent of money loaners and free from the burden of interest they now bear. Strike the evil at the root and its destruction will be much sooner accomplished. The evil of the general practice of money-borrowing among the farmers of this State and the new west, is a necessary one, but it should not be perpetual. They should, as soon as possible, begin to do away with the practice, and the time has arrived when the farmers of the eastern half of the State ought to begin to stand on their own feet. If with the rich soil, the regular and abundant crops, and splendid railroad facilities they cannot do so, when may a change in affairs ever be looked for? The western half of the State is still new, some of it very new, and borrowing must necessarily continue here for some years longer. But the remedy for the evil is with the farmers themselves rather than with the Legislature. G. H. ALLEN.

The Scully Business.

EDITOR KANSAS FARMER:—I wish to draw attention to the wondrous report of the committee on the "Scully" business.

I may safely state that a more illogical one could scarcely have emanated from a west coast nigger palaver. Whilst language is hardly strong enough to describe and denounce the abominable terms enacted from the tenants on the "Scully" estates, almost may it be said of the cross stupidity or prejudices of the said committee. For under what laws have these unfortunate tenants been slave-driven? What but those of the United States? What laws of Kansas have protected these unfortunates? None, absolutely none, for they are made in the interest of the usurer and the landlord. And yet, this committee observe that this state of things—not to be paralleled in any other civilized country—is owing to English landlordism, because Wm. Scully resides in London! Now, Wm. Scully is not an Englishman, but as nearly a full-blooded Irishman as exists—this fact is amusing.

Do these sapient men know that there is an agricultural holding act in Great Britain which provides that the landlord or incoming tenant shall pay the outgoing tenant for all unexhausted manure, all preparatory tillages and all crops in the ground, so that a "Scully" holding is impossible there? For instance: Were a tenant in England to fall plow a portion of his land, and also sow fall wheat previous to the end of his tenancy at the succeeding lady day, he would be paid full value for the fall plowing, cost of the seed and tillage, and also a portion of the preparatory tillage for wheat, although he might have taken a crop during that preparatory tillage. Instead of wasting their breath denouncing an imagination of what is or is not English landlordism, would it not be better for the said committee to put their own house in order and quickly pass, if they can, better legislation in favor of tenants than what exists in England. When that is done, let them crow all they want if they have nothing better to do.

I may add that I am acquainted with one of the committee, and that he has a hopeless craze for talking mediæval history of England under the idea that it is modern. The feudal laws still flourish in what he is pleased to call his mind. Great lords (sic) terrorize the poor tenants who are still serfs attached to the soil. Of course were I to tell the truth to most people here, that the larger tenants in England and Scotland exceed the land-owners here in education, wealth and position, they would not believe it. But would that belief alter the fact?

PUT THE SADDLE ON THE RIGHT HORSE.
Florence, Kas.

P. S.—Just at this moment I hear on good authority that Scully is an American citizen.

Official Intermeddling.

EDITOR KANSAS FARMER:—Your recent correspondent "C." has awakened late, in his indignation at removing the choice of officers from the people. The proposition to create a county assessor, whose election shall be vested in the County Commissioners and one or two other officers, need not startle him. It is the cant of the day to distrust the people, and the air is full of measures to create offices tributary to other offices, or select boards of electors. Witness, in addition to the county assessor bill, the metropolitan police bill, by which it is proposed to place the appointment of Police Commissioners in State officers and Mayors jointly. As to what has been done, consider the removal of the selection of jurors in the principal counties from the Sheriff, chosen by the people, to an appointed commissioner. Also, the vesting of appointment of Railroad Commissioners in the board of State officers.

The manner in which the county assessor business was brought forward was an impertinence that would have been promptly resented if it had been properly apprehended by the people. It would seem to be sufficiently plain that officers should be satisfied (as the good old Methodist discipline has it) to keep the rules and not to mend them. That is what they are chosen for, but not satisfied to leave the people to move whenever changes are desired, we find bodies of all kinds of officers meeting in assemblies not required or recognized by law, to promote changes in the statutes. Thus we have now before the Legislature an amended

charter for cities of the first class, prepared by delegations from several common councils. There can be but one tendency in measures of this kind, and it is to augment the power of persons from time to time in office. It would appear that our County Clerks, our Mayors, our common councils, and the rest, might well occupy all the time they give to the public service in conscientiously administering laws as they are, leaving it to the people at large to act whenever they think changes are needed, in the meanwhile bearing the burden of things as they are. Can't we have a little awakening on this subject?
ADVISER.

Topeka, Kas.

The Hedge Fence Law.

EDITOR KANSAS FARMER:—The subject of high and low hedges was pretty freely discussed in the FARMER two years ago. One man even claimed that high hedge had to his knowledge endangered life by hiding an approaching train. I might mention in favor of high hedge that last summer I saw a team run away with a boy on the wagon. He guided them into a low thick hedge but they went through. Still retaining hold of the lines he guided them into a bigger hedge, which stopped the team. But these isolated cases should not have the weight that general benefits have, and the rights of the individual owner. It has been shown that snow drifts as badly behind low hedges, and also that the benefits of wind-break of high hedges in winter is greater than the oppressive calm to travelers in summer heat. The old saying, "Many men of many minds," should be considered. These "many minds," unrestrained by the iron hand of law, will give diversity even to our fences. Diversity itself is beauty. God's work in nature shows it.

It is surprising to me that before the same Legislature we should see one bill to encourage tree planting along highways, and another bill of such opposite character, viz.: Senate bill No. 111. I am also surprised to see this bill (No. 111) brought forth by Senator Schilling. In all charity I am willing to believe that Mr. Schilling intends no harm to any one. I have known him many years; first as a merchant, and of late years as a money-lender. I do not say this in disparagement of him, for these occupations too are useful and needful in the community. But in his line of business he does not fully comprehend the hardships and toils of our farmers. He should therefore go slow and carefully in pushing a law that so vitally affects us and adds to our burdens. He should give more attention to the bill regulating interest. That subject certainly is well understood by him. I expect to borrow some money in a few weeks of Mr. S., or elsewhere if I can do better. Now as he comes driving along the road to see if my land is valuable enough to secure the loan, if the hedge is too big for him to overlook and see the farm, I'll invite him inside so he can see it sufficiently. The proposed law has one redeeming feature in section 5, and if it is further amended in that section so that it shall not be enforced in any township where a majority of the resident land-owners remonstrate by petition against such enforcement, it will be more fair. As it now stands it is unfair to let such a small number rule, for these few may be a little cranky, or some may have a vengeful desire to make this or that neighbor come to time. If the majority desires a thing, there will generally be not much objection even by those who dislike it.
H. F. M.

Hiawatha, Brown Co., Kas.

Keep Hammering.

EDITOR KANSAS FARMER:—Keep hammering at the Legislature on the interest, usury, redemption and assessment business. Low rates of interest will not drive away capital. Outside capital draws but 6 and 7 per cent. any way; all the rest is commission and usury and goes to such of our own citizens as seek to live by taking advantage of the necessities of others. Laws punishing crime are not based upon a theory that all men are criminals, but merely provide a punishment for those who become such. Redemption laws are not based on a theory that all lenders seek undue advantages to plunder borrowers who may, through circumstances beyond their control, be unable to meet their obligations, but simply give the borrower a limited time to recover from loss or disaster, or to extricate himself from

the hands of those lenders who may be disposed to make gain out of the misfortunes of the borrower, and distress and possibly ultimately make public charges of those who are dependent on him for support. There is no repudiation or evasion about such laws. They are sound public policy.

No county assessorship. As much as possible let the business of the people be in the hands of the people. It would be well for the leaders in our Legislature and in Congress to remember that the Republican party is on trial a second time and is being watched as never before. Also that the rank and file are wide awake and in no temper to brook a disregard of the interests of people who work for a living. Keep up the hammering.
A. N. RUSSELL.

Liberty, Montgomery Co., Kas.

Potwin's Bonds.

The first bonds of the city of Potwin Place will be placed upon the market as soon as they are properly signed. The Merchants' National Bank, of Topeka, has purchased \$15,000 worth of the general improvement bonds due in fifteen years, and bearing interest at 6 per cent. The price which will be paid is 101½ cents on the dollar. The paper upon which they are lithographed is cut about sixteen by twenty-four inches, and is the best quality of bond paper, almost as strong as parchment. The lithograph work is done in green and black, and they are said to be the finest specimens of lithographers' work ever seen in this city. The forty which were printed in this installment, cost Potwin Place \$40, and properly signed bear total value of \$20,000. Each one has thirty coupons attached which are given at receipts for \$15 in interest at 6 per cent., payable on the first days of February and August of each year. Every coupon must be signed by the Mayor and City Clerk, making 1,200 times each official must attach his name. Besides this, the officials must attach their signatures twice on the face, making a total of 1,200 times. This work was being done by the Mayor and Clerk last night. On every bond the seal of the city must appear twice. The "copy" for this work was made up by Mayor Vance and City Attorney Larimer, and the bonds were furnished by C. B. Hamilton & Company, of this city, who have received many handsome compliments upon the manner in which the work was done.—
Topeka State Journal.

Sound as a Dollar.

PROF. A. H. BRICKLEY, Newport, Pa.:—After wearing trusses of various kinds, but all to no purpose, as I got worse all the time, I consulted you with regard to the Dr. Snediker support and put my case into your care, taking treatment December 26, 1887. My bowels were held perfectly, and I have since been doing my duty as section hand on the railroad with perfect comfort and without an hour's loss of time. At the end of one year I am only too happy to say my rupture is entirely healed up.

Before being examined by my family physician, I took the support off and walked two miles without my rupture appearing and he pronounced me a sound man.

After thus testifying to the merits of the Snediker support, any one knowing me and hearing what I say, and don't take treatment, can't have much of a rupture. I can now say, without any doubt, that you can do all you claim in curing rupture with the Dr. Snediker support, and I do recommend it to all afflicted with rupture. My age is 39 years and I had been ruptured sixteen years.
HENRY M. MILLER.

Newport, Pa., January 30, 1889.

LET THERE BE LIGHT.

The question has been: "Can Hernia or Rupture be cured by the Snediker patent support?" It can be proven by the following:

This is to certify that I, Henry Ernest of Andersonburg, Pa., was treated for rupture with the Snediker patent support, on the 27th day of December, 1887, by Professor A. H. Brickley, of Newport, Pa. My rupture has been held to its place perfectly ever since, and I have been doing work of all kinds on the farm without any inconvenience. On January 7, 1888, I called at the office of Professor, Brickley, when he called in the best medical skill to examine me, and to his surprise pronounced me a sound man; and to the best of my knowledge, I have been so for the last three months. I am a farmer by occupation, am 54 years of age, and had been ruptured ten years.
HENRY ERNEST.

February 8, 1889.

The above testimonials are taken from the Newport Ledger, and go to show that the Snediker treatment has proved a great success in other States as well as this. See Dr. Snediker's advertisement, "Rupture Cured," in another column, and let all those who are ruptured profit by it while comfort and cure may be so easily secured.

The Veterinarian.

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

D. M., Greensburg, Kas.—If it does not seriously interfere with movements of animal would do nothing. However, if it does, about the only resort will be to place animal on back. Reduce contents of hernia and then apply a strong clamp, and allow it to remain until it drops off—generally in twelve to fifteen days.

A. O.—Thoroughpin is characterised by a hard tense, elastic swelling on each side, in front of point of hock, in the hollow between hamstring and bone. Pressure with the hand on the swelling on one side causes greater distension in the other. Generally accompanied by lameness. Put on a high-heeled shoe. If the joint is warm and tender, use cooling fomentations or lotions upon it. When heat and tenderness has subsided have the parts fired or repeatedly blistered. Any operation to puncture soas to let out fluid is dangerous. A complete cure is hard to obtain in all cases.

A. J. R.—Garget or Mammitis. Bloody milk generally results from some inflammatory attack, the result of a blow or injury. There seems to be sub-ventis inflammation of gland in your animal. May have resulted from injury or allowing milk to remain unduly long in bag. In severe cases the swellings are hot, red and painful, the secretion of gland is checked, and you can only obtain a bloody, clotted mass in milking. In mild cases, rub gland with camphorated spirits or compound tincture of iodine one part to water three parts. Milk often, and rub gland for some time on each occasion. Give a laxative—one pound to pound and half of Epsom salts with tablespoonful of ginger as drench.

E. B. E., Burr Oaks.—The anasarca or dropsical swellings along the belly and in the legs of animals is indicative of an anaemic condition of the system. Very frequently occurs in brood mares near foaling. It is due to the heavy drain upon the system of the mother by the young animal. The blood of the mother becomes altered, and not being a healthy circulating fluid, passes from blood vessels and gravitates to depending parts of the animal's body. In these anaemic cases the kidneys and skin are very apt to become torpid, and thus the blood becomes loaded with effete materials. Give animal good grooming; exercise daily. Soft feed, as mashes, to keep bowels in condition. Give one-half tablespoonful of nitrate of potash in the mash twice daily. Hand-rub the swelling along abdomen. Pricking the swelling, allowing serum to escape, will assist in causing it to disappear.

J. M. T.—(a) You can do nothing while the animal is milking. When dry, by scarifying the orifice and sinus of teat, or by the introduction of a plug of caustic as nitrate of silver into sinus may accomplish the closure. (b) Depends upon the kind of fracture. If it be a compound or comminuted fracture, and the spicules of bone have penetrated the softer tissues and broken the skin, the result of treatment is that of failure. On the contrary, if a simple fracture with or without displacement, treatment is oftentimes successful. The fractured ends should be brought into apposition. Your skill will be taxed to devise suitable dressing to keep the parts in proper position. It can be kept rigid by applying wooden splints interwoven with bandages. Also could use a starch bandage. Use any kind of contrivance so as to prevent any movement of the fractured ends. Young animals generally take care of themselves. Older animals must be put in slings. It requires two or three months for parts to repair.

WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Parties interested in this Weather Department will please send their subscriptions for the KANSAS FARMER to C. C. Blake, Topeka, Kas. All others will please send to the KANSAS FARMER direct. See advertisement of Blake's Weather Tables on another page.]

WEATHER FOR MARCH, 1889.

March may not "come in like a lamb," but it will be more lamb-like than lion-like. The first quarter of the month will be mild and spring-like, with only moderate rain; but the second quarter will average a little cooler, with more rain and snow. The greatest precipitation of the month will be during the second quarter. Then it will grow colder and be several degrees below the freezing point, though we do not think the minimum will be as low as 20 deg. above zero at any time during the month in Kansas. Still, it will be cold enough to freeze the ground when not covered with snow. During the third quarter the precipitation will be only moderate, and it will probably be as snow. There will not be much precipitation the last quarter, but the cool weather will continue till near the end of the month when it will moderate, so that March will not go out as a lion. We learn that many acted promptly and have sown considerable spring wheat already. We do not think there will be much weather that will be suitable for seeding wheat before it is too late, as part of the time it will be too wet and then too cold; hence we advise farmers to seed promptly whenever the frost is out of the surface and as quick as it is dry enough. We think they will have to do this between now and March 15, or not at all. Probably many do not intend to sow spring wheat in those parts where the "Tables" show that the summer rainfall will be ample; but we think it will be to their advantage to sow all the spring wheat they can, and oats in southern Kansas, if they get it in by March 15, as winter wheat will be cut in June, and they can let the lister follow the binder and raise about as much corn as they could if planted in May. They can then list corn on their oat and spring wheat stubble the last of June and it will make a fair to good crop. But it will not do to list corn on stubble ground in those counties that are to be very dry in July, August and September. If any of our readers have not sent for a copy of the "Tables," we certainly think they should do so. It will enable them to form much better plans for the season than they otherwise can. All our writings constantly refer to the figures in that book, as we cannot copy those long columns of figures into each of our newspaper articles. It is not often that Kansas farmers have such a splendid opportunity to make money as they will have this year. It is very rare when they can raise big crops and get big prices the same year. For this reason we would like to see the farmers feel as enthusiastic as we do. Many have expected relief from the Legislature, but we have said nothing on that question for the simple reason that we were confident it would do no good. There are several things the people who cast a majority of the votes would like to have the Legislature do; but the whole situation was expressed in a nut-shell the other day by a lawyer when he said, "The people are not here." Hence we think that each farmer will have to work out his own salvation as best he can, and we are doing all in our power to help him do so. We know that we cannot always calculate the details in regard to the weather as perfectly as we would like to, still our predictions have always been near enough correct to enable the farmers to raise the best crops the nature of the season would allow. Big crops at a time when all other States and nations have big crops do not pay expenses, and sink the Kansas farmer so much deeper in debt, because prices are then very low. When Kansas people are rich enough to build all kinds of factories in each county so that the products of Kansas soil can be consumed by Kansas people working in Kansas factories, then big crops will pay in any and every year. Kansas farmers can make a big beginning on this line this year if they will only act promptly.

All the advice we have given as to what crops to plant and when, has proved to be correct ever since we started *The Future* four years ago, as is evidenced by more than a thousand letters which we have on file. A. D. Lee, of Coldwater, Kas., under date of February 19, 1889, says: "I ordered one of your 'Tables' sent to my son-in-law, and he writes me that I could not have sent him a present he would have appreciated more highly; that he intends to study it closely and be guided by it, as he followed your instructions last year and planted quite a large field of wheat stubble to corn and raised about the best corn he had. He then sowed considerable fall wheat, which he would not have done only for your prediction of a good crop and good price, for the last few years has been a losing game owing to light crops and low prices. So you can remember we are for you regardless of some soreheads who would not be satisfied were you to give them the earth."

The vital point about Mr. Lee's letter is that his son-in-law raised two good crops which he would not have done but for our advice, based upon those laws of nature which human beings do not control. When a million farmers in America are doing likewise, the "balance of power" will be shifted from the unworthy shoulders of a few to the broader and nobler shoulders of the many. Then, and not till then, will the government become what Abraham Lincoln inspirationally dreamed of in his Gettysburg speech—"A government of the people, by the people and for the people."

There will be a second cold snap about the middle of April, when it will freeze the ground in the more northern part of Kansas; hence we doubt the propriety of sowing oats in northern Kansas, as they may be killed by frosts that will not injure wheat. No corn can be planted till after the cold spell in April, though the ground can and should be prepared sooner. In those counties that will have a summer drouth, ninety-day corn should be used, and by planting the last of April it will be so far matured before the drouth as to make fair to good corn; but the large variety will be ruined in such counties. Grass seed will do well this year in about half of the State; in the other half we think it will be killed during the hot weather. After considering all points carefully, the best advice we can give is to continue to sow spring wheat whenever and wherever the weather will permit, which will probably not be beyond March 12 to 15 in most parts of Kansas.

"That Miss Jones is a nice looking girl, isn't she?"

"Yes, and she'd be the belle of the town if it wasn't for one thing."

"What's that?"

"She had catarrh so bad it is unpleasant to be near her. She has tried a dozen things and nothing helps her. I am sorry, for I like her, but that doesn't make it any less disagreeable to be around her."

Now if she had used Dr. Sage's Catarrh Remedy, there would have been nothing of the kind said, for it will cure catarrh every time.

NEW ADVERTISEMENTS.

Briggs, R. B. For sale.
Bright, A. F. Bees and Poultry.
Carlander, Gust. For sale.
Damon, Chas. P. For exchange.
Eloheitz, C. S. Breeder's card.
Hamilton & Co., C. B. Potwin bonds.
Harden, W. I. F. Seed corn.
Hammond, Wm. For sale.
Kruschke, J. D. Everybody.
Newsom, Lincoln. For sale.
Perry & Hart. Stock Watering Device.
Roudebush, E. B. Wanted.
Sutherland, Geo. Ottawa University.
Smith, S. M. For sale.
Schnelle Bros. Percheron horses.
Snoko, D. T. Dogs.
Salisbury, Mark S. Poultry card.
Tallett, M. D. Wanted.
Westinghouse Co. Engines, etc.

Topeka Weather Report.

For week ending Saturday, February 23, 1889.

Date.	Max.	Min.	Rainfall.
February 17.....	27	11	.51
" 18.....	19	-7	.14
" 19.....	18	-9	..
" 20.....	25	-13	..
" 21.....	48	11	..
" 22.....	87	2	.02
" 23.....	10	-8	..


See Tincher's cedar ad. in 2-cent column.

Money.

Write or call on the National Loan and Trust Co., of Topeka, for loans on real estate. Rates reasonable and terms favorable.

Bulls for Sale.

Fifteen choice Short-horn bulls, from 8 to 20 months old; also a choice number of heifers. Will sell at reasonable prices on terms to suit purchasers. Address T. P. Babst, Dover, Shawnee Co., Kas.



FREE

Send \$5 Solid Gold Watch
Sold for \$100 until late-
ly. Best \$35 watch in the
world. Perfect time-
keeper. Heavy Solid
Gold Hunting Case. Ele-
gant and magnificent. Both
ladies' and gents' sizes, with
works and cases of equal
value. One Person in each
locality can secure one free.
How is this possible? We answer
—we want one person in each
locality, to keep in their homes,
and show to those who call, a complete line of our values,
as well as the watch, we send free, and after you have kept
them in your home for 2 months and shown them to those
who may have called, they become your own property; it is
possible to make this great offer, sending the Solid Gold
watch and Costly samples free, as the showing of the sam-
ples in any locality, always results in a large trade for us;
after our samples have been in a locality for a month or two
we usually get from \$1000 to \$5000 in trade from the
surrounding country. This, the most wonderful offer ever
known, is made in order that our samples may be placed at
once where they can be seen, all over America. Write at once,
and make sure of the chance. Reader, it will be hardly any
trouble for you to show the samples to those who may call at
your home and your reward will be most satisfactory. A postal
card on which to write us costs but 1 cent and after you know
all, if you do not care to go further, why no harm is done. But
if you do send your address at once, you can secure free one
of the best solid gold watches in the world and our large line of
COSTLY SAMPLES. We pay all express, freight, etc. Address
Stinson & Co., Box 199, Portland, Maine.



HUMPHREYS' HOMEOPATHIC VETERINARY SPECIFICS

That the diseases of domestic animals, HORSES, CATTLE, SHEEP, DOGS, HOGS and POULTRY, are cured by Humphreys' Veterinary Specifics, is as true as that people ride on railroads, send messages by telegraph, or sew with sewing machines. It is as irrational to bottle, ball, and bleed animals in order to cure them, as it is to take passage in a sloop from New York to Albany. Used in the best stables and recommended by the U. S. Army Cavalry Officers.

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

CURES
A. A.—Fever, Congestions, Inflammation.
B. B.—Spinal Meningitis, Milk Fever.
B. B.—Strains, Lameness, Rheumatism.
C. C.—Distemper, Nasal Discharges.
D. D.—Bots or Grubs, Worms.
E. E.—Coughs, Hoarseness, Pneumonia.
F. F.—Colic or Gripes, Bellyache.
G. G.—Miscarriage, Hemorrhages.
H. H.—Urinary and Kidney Diseases.
I. I.—Eruptive Diseases, Mange.
J. K.—Diseases of Digestion.
Stable Cage, with Specifics, Manual, Witch Hazel Oil and Medicator, \$7.00
Price, Single Bottle (over 50 doses), .60
Sold by Druggists; or
Sent Prepaid on Receipt of Price.
Humphreys' Med. Co., 109 Fulton St., N. Y.

Patents.

The following list is reported through the official records for the week ending February 19, 1889, by Higdon & Higdon, Patent Lawyers, office rooms 55 and 56 Hall Building, Kansas City, Mo., and room 29 W St. Cloud Building, Washington, D. C. By applying to them at either office a printed copy of any patent here named can be obtained for 25 cents.

KANSAS.

Water or liquid elevator—David C. Battery, Florence.
Metallic roofing—Samuel C. Frederick, Arcadia.
Wood engraving machine—Willis W. Krutch, Fort Scott.
Perpetual calendar—Thomas E. McKee, Beloit.

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellow-men. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Power's Block, Rochester, N. Y.

Farm Loans.

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

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

SECRETS OF LIFE FREE.

A Private Adviser for those contemplating marriage and for men suffering from Private, Nervous or Chronic Diseases. Send 6c. for sealed copy.

Consult the old Doctor confidentially.
L. R. WILLIAMS, M. D.,
68 Randolph St., Chicago.

The Home Circle.

To Correspondents.

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

The Only Foe.

Wild, threatening sky, white, raging sea,
Fierce wind that rends the rifted cloud
Sets the new moon's sharp glitter free,
And thunders eastward, roaring loud!

A fury rides the autumn blast.
The hoary brine is torn and tossed;
Great nature through her spaces vast
Casts her keen javelins of the frost.

Her hand that in the summer days
Soothed us with tender touch of joy,
Deals death upon her wintry ways:
Whom she caressed she would destroy.

Life shrinks and hides: all creatures cower
While her tremendous bolts are hurled
That strike with blind, insensate power,
The mighty shoulder of the world.

Be still, my soul, thou hast no part
In her black moods of hate and fear;
Lifted above her wrath thou art,
On thy still heights, serene and clear.

Remember this—not all the wild,
Huge, untamed elements have force
To reach thee, though the seas were piled
In weltering mountains on thy course.

Only thyself thyself can harm.
Forget it not! And full of peace,
As if the south wind whispered warm,
Wait thou till storm and tumult cease.

—Celia Thaxter, in *The Century*.

Then 'tis our best, since thus ordained to die,
To make a virtue of necessity; for he who is vain;
Take what he gives, since to rebel is vain;
The bad grows better which we well sustain;
And could we choose the time, and choose aright,
'Tis best to die, our honer at the height.

—Dryden.

Melancholy is a fearful gift;
What is it but the telescope of truth?
Which strips the distance of its fantasies,
And brings life near in utter darkness,
Making the cold reality too real.

—Byron.

DOES EDUCATION UNFIT GIRLS FOR HOUSEHOLD DUTIES?

By Miss Hannah G. Miller, and read before the Wellington Farmers' Institute, February 18, 1889.

Before answering this question in either the negative or the affirmative, we will consider the subject under several heads. 1st. What is education? 2d. What are household duties? 3d. What bearing or influence has education upon the management of household duties? The word from which our word educate is derived signifies a drawing forth frequently, repeatedly, persistently, and therefore strongly and permanently. In a secondary sense, it signifies a drawing forth or training of the faculties of the mind. Education is then the drawing forth of the powers of the being habitually and permanently. The powers or faculties of our human natures may be classified as physical, intellectual and moral. The physical nature is that which is influenced by external agencies, but whose training or neglect largely influences our happiness or our woe. Due attention given to the training of this nature procures a well-developed, healthy body, a fit temple for the mind and soul. It gives grace and beauty to the movements and carriage of the body. It develops the organs and members of the body so that the former may perform their functions with the best results and the latter may be used to the best advantage to the individual. It gives to the whole being that power of self-control which is one of man's greatest attainments.

The intellectual nature is that which is employed in the acquisition of knowledge. It is capable of indefinite development and gains strength by every act of acquisition, but by its neglect its powers are wasted. The mind is the seat of this nature and it becomes the storehouse of our knowledge. The faculties are developed and strengthened by education. Thus observation, memory, judgment, reasoning, invention, etc., may be so cultivated and enlarged that they secure for us the power of doing things well and with the greatest satisfaction to ourselves and others. They give to us a better understanding of human nature and enable us to make our intercourse with our friends of more pleasure and profit.

The moral nature is that which should receive the greatest attention, for the development of its faculties constitutes the formation of character. The feelings, desires, sympathies, conscience, all are to be guided and

cultivated. The love of self is to be conquered, and the habit of yielding to the inclinations of others is to be encouraged. The will, the prime agent in the shaping of our destinies, may be so strengthened that nearly all things are possible to us.

Therefore, education, in its widest sense, is a general expression that comprehends all the influences which operate on the human being, stimulating his faculties to action, forming his habits, moulding his character, and making him what he is.

Household duties is a term very broad in its signification. We shall speak of only those duties which devolve upon woman. 1st. The organization of home depends upon the woman, and she is necessarily the manager. 2d. The mental duties of tidying, cleansing, laundering, the arrangement of household articles, and the preparing of food are hers. 3d. The care and control of the children, the supervision of their education, and the formation of their character are hers. 4th. The duty of exercising taste and making home attractive and giving comfort and happiness to its inmates is hers.

To manage a household efficiently, there must be method. A much larger amount of work may be done by arranging things properly and doing everything at the right time. Industry, prudence, punctuality and perseverance are necessary qualifications and must ever be exercised. There should always be an air of neatness, order, arrangement and grace about the home which will give a sense of pleasure which cannot be defined. The manager of a home must therefore be able to pre-serve order, to sweep, dust and polish, to wash, iron and scrub. She must be able to prepare in countless ways the various kinds of viands to tempt the fastidious tastes of her lord. And all these things should be done without any delay or any break in the peace of the household.

The manager of the household is also the natural guardian of infancy. The moral atmosphere of the home must ever be preserved so that it may send into the world men of industry, of integrity, of high principle, of sterling honesty of purpose.

Home should be the most attractive place on earth. It must have an air of comfort, cheerfulness and welcome about it. It is not wealth that brings about this condition, but it is the exercise of taste, of art, of moral influence of her who has the home in charge. A flower in the window, a picture on the wall, a bird at the window-sill, books upon the table, and nameless little things add much to the attractiveness of home. Music, painting, the various accomplishments, each lends its peculiar charm. Above all, the home must be pervaded by the spirit of love, kindness and politeness.

Household duties are so manifold and of such various natures that to perform them draws more heavily upon the mental, moral and nervous forces than the tasks of any other occupation. Yet she who undertakes them is queen of a little world, and occupies the grandest sphere of earth. Is it not evident that they who take upon themselves these duties and solemn responsibilities need to be prepared for their work? Who requires health, strength and activity of body more than she who performs the labor of home? Where are thought, tact and judgment of more avail than in the management of the affairs of the household? Who is he that wields a greater influence over the lives of others than the wife and mother.

Education gives skill and skill adds power; therefore education is a means of economy of both time and labor. It takes intelligence and art to extract the joy and happiness out of life; therefore lack of intelligence may make unhappy homes. We can readily see that education does not unfit one to carry on household duties, but, on the other hand, that it is requisite for their full and complete performance.

You may say that many who have presided over homes and have given to the world sons and daughters, have made life a success without having been educated. These may have been gifted in a greater degree with tact and the influence of a mother's love. Yet if we may look into the secret chambers of their hearts, we may find that their burden of care was often hard to bear, and that their lives might have been made easier had they been made more capable by judicious training. Education does not make a woman, but it enables her to accomplish it in a better way.

It may often be observed that girls who

have received a good education and who are highly accomplished, almost, if not entirely, fall when they become mistresses of homes. The failure is not due to their education and accomplishments, but it arises from a lack of preparation in a certain line. An important part of their education has been neglected. Observation shows us that the best ordered households are presided over by disciplined minds. The homes of our literary women are the best regulated and the happiest in the land, the exceptions to this rule being very rare. The home of Mrs. Mary A. Livermore may be given as a proof of this statement. On entering her house, one feels at home the moment he crosses the threshold. The parlor is decorated with pictures, engravings, and pretty brackets arranged with artistic grace, while all is pervaded with that subtle charm of a real home atmosphere. Perfect order is found throughout the house. Mrs. Livermore says there is not any kind of household work with which she is not familiar, and she defies any one to rival her in that line. Her drawers, closets and whole house are always free from inspection.

The girls are they who in a few years will wield the destinies of nations. I would that they all may be able to walk their path of life sweetly, contentedly and cheerfully, and those may be few who have cause for regrets and must say, in the language of Maud Muller, "It might have been."

How to Make Home Attractive.

Let there be one room where the children may pop corn, make candy, crack nuts, play hide-and-seek, fruit basket upset, charades, etc., without any interference, and where they may get healthful exercise on stormy days and long cold winter evenings. An uncarpeted kitchen is a grand place, and mother can afford to smile indulgently at the merry pranks, knowing her little ones will remember these glorious playtimes even when they are old and weary and careworn, and love to think how much grace and forbearance mother had in those dear old careless days gone never to return.

Provide good bright reading. Read aloud some bright story full of wit or valor.

Give the best and brightest of yourself to your home circle.

Help them sing sweet songs; if the voices fail to get the right pitch, no matter, do not chide; too much chiding results in discouragement. Have an organ, if possible, and a violin for the children to test their talents on.

Give the evenings to the children. Have less ruffles, perhaps, but more pleasant words and smiles.

Let the little ones crowd around your knee for help and comfort.

Tell them the sweet story of the Saviour's life on earth.

Let them kneel in the warm room and say their quiet prayers; it will not disturb father's reading, and he will have a tenderer love for the wife who tries to do her whole duty.

Train and educate for the higher life and the enduring home in heaven, and the lowly earthly home will become a supremely happy place.

From such a home young manhood will go forth with no taint of whisky or tobacco on his breath, virtuous and resolute, to battle with the evils existing in the world.

Compulsory Education.

Prussia has long had compulsory school attendance between the ages of 6 and 14 through the whole school year, and the same laws in regard to school attendance, with slight modifications, prevail through all the States in the German Empire. In Norway, Sweden and Denmark education is compulsory and universal, and it is rare in these countries and in Finland to find an adult who cannot read and write.

Austro-Hungary has compulsory laws similar to those of Germany, which are pretty well enforced among the Teutonic population, but are not enforced among the Hungarians and other Slavs.

Italy and Greece have compulsory laws which are being better and better enforced, though at present less than one-half of their men and women can read. Spain enacted a compulsory law in 1857, but has never enforced it, and 60 per cent. of her adults cannot read. Portugal has a similar dead letter law, and still greater illiteracy than Spain.

In Switzerland compulsory education is well carried out in the Protestant cantons,

High - Pressure

Living characterizes these modern days. The result is a fearful increase of Brain and Heart Diseases—General Debility, Insomnia, Paralysis, and Insanity. Chloral and Morphia augment the evil. The medicine best adapted to do permanent good is Ayer's Sarsaparilla. It purifies, enriches, and vitalizes the blood, and thus strengthens every function and faculty of the body.

"I have used Ayer's Sarsaparilla, in my family, for years. I have found it invaluable as

A Cure

for Nervous Debility caused by an inactive liver and a low state of the blood."—Henry Bacon, Xenia, Ohio.

"For some time I have been troubled with heart disease. I never found anything to help me until I began using Ayer's Sarsaparilla. I have only used this medicine six months, but it has relieved me from my trouble, and enabled me to resume work."—J. P. Carzanett, Perry, Ill.

"I have been a practicing physician for over half a century, and during that time I have never found so powerful and reliable an alternative and blood-purifier as Ayer's Sarsaparilla."—Dr. M. Maxstart, Louisville, Ky.

Ayer's Sarsaparilla,

PREPARED BY

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

but less strictly in the Catholic. In Belgium and the Netherlands schools are provided in every commune, but attendance is voluntary, and though illiteracy is diminishing there is still about one-third of the men and women who cannot read or write. To encourage education in Belgium the local franchise has been offered to all who can read and write, independent of the usual property qualifications. In Russia, with the exception of Finland, education is very backward, and in 1882 only 19 per cent. of her army recruits could read. Compulsory attendance in Great Britain is left to the school boards, but is practically required between the ages of 6 and 13. France not only has compulsory attendance but her schools are more modernly, more thoroughly and more expensively organized than in any other country. In all European countries where education is compulsory the law requires attendance through the whole school year, though in Great Britain half day attendance is accepted by some school boards. The period to which the compulsory laws apply is quite uniformly from 6 to 14, except in Great Britain, where it is from 5 to 13, and in Greece, where it is from 5 to 12.—*Chicago Times*.

Curry of Meat or Chicken.

Put your chicken, veal, or other meat in a stew-pan with water enough to cover it, a little salt and pepper sprinkled on the pieces of meat. Let all simmer slowly until quite tender. Take it out on your meat dish (a good large one) and set it in the oven to keep hot. Put three-fourths cup of rice into a kettle or sauce-pan to boil, so that it will be cooked at about the same time as the meat. Having taken out the meat from the stew-pan, let the liquor in the pan come to a boil, then stir into it the following: One full tablespoonful of flour blended with cold milk until perfectly smooth, and an even tablespoonful of currie powder, mixed thoroughly through the flour and milk, and a little salt. This mixture should be stirred into the above-named liquor, and it will become a sauce of the consistency of cream. Put the rice around the meat on the dish, and pour the currie sauce over all. Be sure to have plenty of the sauce or gravy, so that it will penetrate the rice and the meat, and leave some besides. If your meat be lean, put a good piece of butter into the sauce, and if preferred, the flour and butter can be mixed and the currie powder dissolved in a little boiling water and stirred into it. This is a matter of choice with the cook. The main point to be considered is to have the sauce entirely free from lumps.—*St. Paul Farmer*.

I will mail a valuable present to any minister, teacher or friend of education on receipt of address. THOS. J. BRYANT, St. Joseph, Mo.

• • • PRESIDENT.

KANSAS FARMER.

ESTABLISHED IN 1893.

A TWENTY-PAGE WEEKLY.

Published Every Thursday by the

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Topeka, Kansas.**ADVERTISING RATES.**Display advertising, 15 cents per line, again, (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.
Annual cards in the *Readers' Directory*, consisting of four lines or less, for \$15.00 per year, including a copy of the *KANSAS FARMER* free.
Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.
All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders,
KANSAS FARMER CO.,
Topeka, Kas.

Persons having business with the Cowley county Alliance may address R. C. Bourdette, Secretary, Dexter.

We have a well-written essay on "Economy," read by Mrs. T. L. Jones before a farmers' institute at Hays City recently. It is booked for our "Home Circle" next week.

The fourth annual meeting of the Holstein-Friesian Association of America will be held at the Fifth Avenue hotel, New York City, on the 20th day of next month, March, 1889.

Next Monday Grover Cleveland will retire from, and Benjamin Harrison will be inducted into, the presidency, and the proceeding will create no bad blood anywhere. Such is a free country.

A very successful farmers' institute was held at Hays City, the 14th and 15th inst. Professors Shelton and Walters, of the Agricultural college, attended, and as usual were very serviceable. The attendance was large and composed of earnest, intelligent people. The program was a good one. Resolutions were passed making the institute a permanent institution.

The President signed the bill which provides for the admission of four new States before the regular assembling of the national Congress, in December next. South Dakota will come first, then North Dakota, Montana and Washington—all by proclamation of the President after certain formalities—conventions, elections, etc., are complied with. South Dakota, as we understand, is ready now.

When ground is plowed in the fall for oats the following spring, a good way of proceeding, N. J. Shepherd says, is to use the Disc harrow to loosen and fine the soil and then use the drill to sow the seed. Considerable time can be saved by this plan. While there is the advantage of having the seed sown more evenly, it is not necessary to have the surface of the soil stirred to any considerable depth for oats, as the roots work very near the surface, and the Disc harrow will stir the soil sufficiently deep to cover the seed well, and this if all that is necessary.

THE LEGISLATURE.

This is the last week of the session; The constitutional limit for pay expired yesterday, according to legislative interpretation—counting Sundays as working days. There were no bills of general application which had passed both houses at the close of last week's proceedings—all being local bills relating to some particular township, county, city, school district or person. Sixteen of these were published in the official State paper Saturday morning. Last week was the seventh week of the session, and up to Wednesday, the amount of work for enrolling clerks to do did not exceed, in the aggregate, more than one competent person could do easily in one day, though thirty-eight clerks were engaged at the beginning and several others were taken in soon afterwards. There has been at least forty, and we believe more than fifty, of these utterly useless persons drawing pay at the rate of \$3 a day. Enrolling clerks have nothing to do but copy, in a full, plain hand, bills that have passed both houses and are to be sent to the Governor for his approval. A committee on enrolled bills is appointed at the beginning of a session, and there is a chief enrolling clerk. The committee and one clerk could easily handle every thing that goes to them the first five weeks of an average session, and have nothing to do—in the enrolling way—the first three weeks except taking care of one appropriation bill on or about the tenth day, to pay the members and clerks.

There will be very little general legislation this session beyond appropriation bills. Several days have been spent in each house debating the interest question. The reduction of 1 per cent. in the legal rate and 2 per cent. in the contract rate seems to involve grave considerations—so grave, that notwithstanding the party which elected the Legislature promised it, and notwithstanding money is now being loaned at 6 per cent. as far west as Hays City, a very large proportion of the members do not see their way clear to favor the proposed legislation. What will they say to their constituents in explanation? And what will their constituents do in reply? Send them back again? Hardly. No redemption law will be passed, nor will anything be done to enlarge the jurisdiction of the State Board of Agriculture so as to get nearer the farmers of the State; nothing will be done in the way of reducing salaries; indeed, there will be no remedial legislation of any kind.

The Senate, Friday, agreed to pass half a dozen bills appropriating large sums of money to private hospitals and other charitable institutions which have no more claim on the State than they have on the empire of Germany. Six thousand dollars given to Christ hospital, Topeka; \$3,000 to Mercy hospital, Fort Scott; \$2,400 St. John's hospital, Leavenworth; a like sum to St. Francis hospital, Wichita; Kansas Orphan asylum, Leavenworth; Home for friendless women, Leavenworth; Ladies' Benevolent home, Wichita; Atchison City hospital, Atchison; and Wyandotte mission school, Wyandotte, (Kansas City, Kas.)

The Senate committee appointed to investigate the beef combine disagreed and made two reports. Both reports contain this paragraph in the opening:

The testimony adduced in the examination consists principally of the opinions and experience of those who transact business in the Kansas City and Chicago cattle market. We find that there is a prevailing opinion among many farmers and stock-raisers that a combine exists among the proprietors of the packing houses in Kansas City to control the prices of cattle on foot and the prices of dressed meats.

The majority—Senators Chapman, Rankin and Kelly report that they do

not find positive proof of the existence of such a combination, but they are led to believe from the circumstantial evidence and from personal observation that the existence of the packing houses at Kansas City centralizes the cattle market of the West at that point and places in the hands of a few a power that can be used at will to the detriment of the stock-raisers of our State. They therefore recommend as a protection to stock-raisers and others that the municipal governments of the State be empowered by an act of the Legislature to enact ordinances requiring local inspection on foot and slaughter of cattle, the meat of which is offered for sale in the city where such ordinances are enacted.

The minority—Senators Roe and Mohler, report "that there is a prevailing opinion among a number of the people of Kansas that there exists a combination or agreement among the proprietors of the packing houses, the effect of which is to control the price of cattle on the hoof and affect the price of dressed beef, but your committee has been unable to obtain any testimony from which they can find such fact to exist."

What else will be done about it, except to spend \$2,500 in sending a delegation to the St. Louis convention March 12, can only be guessed at. Our guess is—nothing.

The proposed action providing six or seven judicial districts elicited a great deal of discussion and brought out a strong lobby in its favor, consisting chiefly of aspiring lawyers, as a paragraph from the *Capital-Commonwealth's* report shows—"The Senate lobby was full of judgeship-hunters yesterday. About forty were hovering about the chamber and filled the cloak room with judicial dignity. The judicial apportionment bill was the bait that brought them in." Wonder what kind of bill would bring out that many farmers.

The discussion on the interest bill in the House was quite general, and there was no opposition to fixing the rates at 6 and 10 per cent., but there was great diversity of opinion concerning the penalty for violation of the law. The bill provided as a penalty a forfeiture of double the excess of interest received above the maximum contract rate. The sentiment of the House was in favor of a more severe penalty and after several hours' discussion an amendment offered by Mr. Linscott was adopted which provides in substance that when the money lender takes over 10 per cent. (the contract rate) and less than 12 he shall forfeit double the excess taken above 10; that when he takes 12 per cent. interest and less than 15 per cent. he forfeits the entire interest; when he takes 15 per cent., and less than 20 per cent. he forfeits all the interest and half the principal; if he takes 20 per cent. or more he forfeits all the interest and all the principal.

The report for Saturday shows that there have been introduced 406 Senate bills, and 744 House bills, making a total of 1,150.

Rural Kansan is the name of a new monthly farm journal just started at Peabody, Marion Co., Kansas, under management of a company, at 50 cents a year. It is a sixteen-page paper, the pages containing each four columns a little shorter than those of the *KANSAS FARMER*. The first number of the *Rural Kansan* has reached our table. It is well filled with good matter in which every interest of agriculture is represented. The selections were made by one whose work shows his faith. The *KANSAS FARMER* welcomes this new candidate to public favor, and bids it God speed, go ahead and rustle; forverily the harvest is ripe but the laborers are few. We sincerely wish the *Rural Kansan* all the prosperity which its managers hope for.**ECONOMIZING MOISTURE.**

Two very interesting papers on methods of saving or storing moisture were made before the State Board of Agriculture at the last meeting. One of the papers was prepared by H. R. Hilton, Topeka, the other by Hon. Martin Allen, of Ellis county; both are published in full by the State Board of Agriculture, and may be obtained by addressing the Secretary, Hon. Martin Mohler, Topeka. We give a few extracts:

HILTON.

"The natural drainage of the soil of Kansas, like that of all the trans-Missouri country, is superior to that east of it. The soil under deep cultivation will absorb a very large percentage of the rain that falls—at least four-fifths. The soil of central and western Kansas has a more perfect natural drainage than in eastern Kansas, excepting in some of its river bottoms. An average rainfall in central Kansas of twenty-five inches will be equal to thirty inches in eastern Kansas, because of its better drainage and storing capacity and the better subsoil for raising water by capillary power, and we find the average production taken for ten years fully as great in central as in eastern Kansas. Central Kansas is, however, at a disadvantage because of its proximity to great stretches of unimproved buffalo-grass-covered prairies that under a July sun are reflecting heat to be carried north and east into the cultivated fields, where it loses some of its virulence at an expense of the unmaturing crop of that season. Western Kansas averages less than twenty inches of rainfall. This fully utilized may be sufficient for special crops requiring minimum supply of moisture; but whatever benefit, if any, that might result from deep cultivation with this rainfall, there is no doubt that central Kansas will be the beneficiary, for this cultivation and increased storage of the rainfall on the frontier will temper the winds coming from the south and west to the country lying to the north and east.

"Trees, growing crops, taller grasses, ponds of water—all have their influences in modifying the climate in our latitude, because they aid in conserving the moisture; but greater than all these is an increase of three or four inches in the rainfall utilized. And this increase must come by very deep plowing, or rather, subsoil plowing, of the land under cultivation, the removal of large herds from the grass land, and the handling of cattle in small pastures and in small herds. Cattle are a necessity to the pioneer, to aid him in maintaining an existence on the frontier; but their influence by treading the soil is all against the civilization of the climate. They promote the conditions most favorable to their own existence where dependent on their own resources the year around. Their entire removal promotes the conditions most favorable to a purely agricultural life. We cannot spare the cattle; we must compromise on that method of handling that will break up as much as possible their habits of segregation by dividing them into smaller herds. In the meantime, the farmers, exposed to the greatest adverse influences, must protect themselves by subsoiling at least once very deep. This is their law of self-preservation, just as the packed surface is the law of self-preservation, to the wild animal life."

ALLEN.

"Among the elements that may here be mentioned as valuable aids in the re-

tention and preservation of water are, plowing the soil, or breaking the crust, so that water may the more readily penetrate it, which may be followed by subsoiling or trench plowing, so that a surplus of water at any time may the more readily sink down deeply, where it will be held in reserve for the time of need, and not be forced from necessity to pass over a hard and often sloping surface toward the sea.

"Probably the initiatory steps in preservation of water upon the plains was taken by the buffalo bulls—digging up the dry dust with their hoofs and horns, while challenging their rivals to combat. These "wallows," as they are called, have been deepened from time to time by the wind blowing the dry dust out of them; and even now, it is believed that if they could only be kept continually full of water, this alone would have a vast ameliorating influence upon the moisture of our atmosphere, it having been repeatedly observed that whenever these buffalo-wallows are full of water, the ground is not only in good condition, but the atmosphere also, for the favorable growth of crops generally.

"Therefore, let us improve upon what the buffalo has begun for us. Let us in working or making our public and private roads, do just the opposite of what the people are compelled to do where the surface of the whole country is more level and therefore moisture more abundant. Indiana and Illinois annually spend large sums of money to get rid of their surplus moisture along their highways; in other words, to cure mud-holes by various devices of ditching, draining, filling, and putting in bridges, culverts, etc. All these are among what are known as public improvements over vast areas of the Eastern and Middle States, but deemed quite unnecessary in Kansas, especially in the central and western parts, that are supposed to be suffering for the want of moisture.

"Now let us in making and working all our private roads, whether we need them or not, make dams wherever such roads cross over slight depressions. These will be found very numerous—say from three to five for each mile. But for the sake of argument let us suppose there are only two to each mile of road and a road on every section line: this calculation would give to the western two-thirds of our State the enormous number of 212,800 such dams. And suppose these on an average to each cover one-fourth of an acre and to be of an average depth of only one foot; you can each of you figure out for yourselves the vast amount of water that would be retained from passing at once away to the sea.

About Kaffir Corn.

There is a great deal of enquiry concerning Kaffir corn. Is it a good fodder plant; or is it good only for seed? And does anybody recommend it except those who have seed to sell? What are the material facts about it? We have had no experience with it, and hence must rely upon our correspondents for information touching its merits. Here is what A. J. Abrahamson, of Scandia, Republic Co., Kas., says about his experience:

"Last season I planted one peck of the seed, using for the purpose, a broom-corn drill that failed to work well, not planting regularly, and on account of this, I failed to secure a good even stand, and had to work over about eight acres, when, probably, the same seed should have been planted on not exceeding five acres. The rows were about the same distance apart as ordinary corn rows, and the cultivation same as for corn. The harvesting was done

with a dropper and then bound by hand and shocked to cure out. The most of it was then threshed with an ordinary separator, and it turned out near two hundred bushels. In threshing a part, the bundle was retained by the feeder and only the heads allowed to come in contact with the cylinder; the remainder was allowed to go through the machine, and though the fodder was considerably broken and torn up, it appeared not to be injured in the least for feeding or keeping. About one-half the fodder has been fed out, and the remainder, whether run through the machine or held until the seed was stripped, has kept green and bright and is relished by horses and cattle equally as well as hay or corn fodder, and they do as well upon it as on either of them. My first trial has induced me, this season, to try it still further. I expect to plant forty acres this spring, and shall follow much the same course as last year, only I will try to obtain a better drill, harvest with the self-binder instead of dropper, and try cutting earlier, in hopes of securing two crops—the first of fodder and the next of seed. I have not fed but a portion of the grain—only enough to be convinced it was good feed, almost if not quite equal to corn, and can supply seed to your readers who desire to give it a trial."

Salt as a Fertilizer.

Prof. Hay, in a lecture on Kansas salt delivered before the State Board of Agriculture, last month, presented a good many bits of testimony concerning the use of salt as a fertilizing material. One writer says: "My experience in the use of salt leads me to the following conclusions: It keeps the land cool and moist. It neutralizes drouth. It exterminates all soil vermin. It prevents potato rot. It glazes and stiffens straw, preventing crinkling and rust. It keeps the ground in such condition that the berry of all kinds of grain fills plumply, however long-continued the hot dry weather may be."

A Wisconsin farmer says: "For twenty years I have raised wheat successfully, while my neighbor's wheat fields were swept from existence by this terrible pest. My soil is clay loam, while theirs is sandy loam or black muck. All of those who sowed salt with their wheat this year, had good plump wheat. One of my neighbors who sowed part of his wheat with salt, had plump wheat where salt was sown, while the balance of his wheat was destroyed by chinch bugs."

An Illinois farmer writes: Young fruit trees can be made to grow and do well in places where old trees have died by sowing a pint of salt on the earth where they are to stand. After trees are set, I continue to sow a pint of salt around each tree every year. * * * In 1877 my wife had a garden forty feet square. It was necessary to water it nearly every day, and still the plants and flowers were very inferior in all respects. In 1878 I put half a bushel of salt on the ground, and then turned it under. The consequence was that the plants were of extraordinary size, and the flowers of great beauty. It was not necessary to water the garden, which was greatly admired by all who saw it. The flowers were so large that they appeared to be of different varieties from those grown on land that was not salted.

Prof. Shelton, of the Kansas Agricultural college and Director of the Experiment Station, in Bulletin No. 4, shows the value of salt on wheat. A dressing of 800 pounds of salt per acre on two plots gave an average increase of close to 9 per cent. of cleaned grain as compared with plots not so dressed, as well as increase of straw. Johnson's agricultural chemistry (am-

ed. 1855) has this: "Common salt, has in many districts, a fertilizing influence upon the soil. It destroys small weeds, improves the quality of pastures, and renders them more palatable; strengthens and brightens the straw and makes the grain heavier per bushel, both of wheat and oats. It has been observed, also, to produce specially good effects upon mangold-wurtzel.

After presenting statements like these Prof. Hay concluded that part of his lecture which referred to the fertilizing properties of salt, as follows: "There is abundant evidence of the same sort from all parts, and it becomes the enterprising farmers of the West—Kansas most of all—to use salt both as a bug-destroyer and as a fertilizer; thus increasing their crops and aiding materially the development of the salt industry—to make that of Kansas grow, and not diminish that of other States. In this use of salt it is well to proceed with intelligent caution. Don't be too niggardly to use enough; don't be so careless or extravagant as to use too much. Salt destroys insect life. It also destroys vegetable life, if enough be used. The quantity that is enough to destroy chinch bugs will also kill many small weeds. Large quantities will kill grain or even trees. Fortunately, most of our useful plants will stand a great deal of salt; but some of them will become salt to the taste before they are killed. From the testimony given in "Salt Sayings" and agricultural papers it appears that less than two bushels to the acre produces little good. From 200 to 400 pounds per acre appears a range of quantity within which the fertilizing qualities of the mineral are conspicuous, and its powers as an insecticide certain. Some of the quotations refer to different effects on different soils. This would certainly be a proper field for experiment at the State Agricultural college, the United States Experimental Stations, as well as for individual farmers in their own regions."

Odessa Wheat.

A correspondent of the *Nebraska Farmer*, S. C. Bassett, referring to Professor Blake's recommendation of Odessa wheat, gives some interesting facts concerning its history in Nebraska. He says:

The Odessa wheat mentioned by Professor Blake will be readily recognized by many Nebraska farmers under the name of grass wheat. At least, the wheat to which I have reference was known by both names. It is a red wheat, beardless, small kernel, a stiff straw, stands up well, but is not a rank grower. Until it begins to shoot, it has much the appearance of grass, hence the name. It was introduced, together with wild buckwheat into this section of the State about the year 1875, and for several years was all the rage, (I mean the grass wheat, not wild buckwheat, the latter still flourishes). For the first few years it yielded well, twenty, twenty-five and thirty bushels per acre. One crop of 1,000 bushels from forty acres, when wheat was worth 80 cents per bushel, is remembered with pleasure. After four or five years it deteriorated rapidly both in yield and quality, and none is now raised to my knowledge in this section. This wheat was raised when our land was comparatively new and free from weeds. One serious objection to this wheat, on land which is at all weedy, is that it is a very slow grower in the early part of the season and thus allows the weeds to get a start. It is a hardy wheat, and a winter as well as a spring wheat. One season, 1877, when headers were in use, a field of this wheat became too ripe and shattered badly in harvesting. The fall was quite moist, and a fine stand of wheat was secured in the stubble. It looked so promising that it was allowed to remain, and the next year yielded seventeen bushels per acre. Seed from this volunteer crop was sown among the corn in the early fall of 1878, and yielded fifteen bushels per acre. The wheat from the second crop sown in the fall was larger, very plump, and had more the appearance of white wheat. Further efforts to cultivate winter wheat proved a failure. In Nebraska soil, which in winter and early spring is never overburdened with moisture, I do not think it possible for any variety of spring wheat to be injured by being sown too early. If an occasional injury was the result the advantages are so largely in favor of early sowing that one can well afford to take the chances. Our best crops of wheat have almost invariably been those which were sown earliest in the season, on two occasions as early as February 20.

If it was the intention to recommend the Odessa or grass wheat for cultivation in western Nebraska and eastern Colorado, where their lands are comparatively new and free from weeds, and where the climate, as regards moisture, is similar to central Ne-

braska twelve or fifteen years ago, I am of the opinion that it would prove a very desirable wheat, providing good, pure seed can be found.

The *Kansas City Live Stock Record and Farmer* was sold some days ago, to the *Kansas City Live Stock Indicator*. The consolidation of the two papers was a good move in every way. The only thing about it which we do not approve is the length of the survivor's name—*Kansas City Live Stock Indicator, Record and Farmer*.

Inquiries Answered.

BARLEY OATS.—Apply to some of our seed advertisers. Who has had any experience with this variety of grain?

SALT.—Inquirers concerning the use of salt as a fertilizer will find something to interest them in an article on editorial pages.

TANNING.—Hides may be preserved with the hair on by soaking them a few days in a solution of alum and salt, in the proportion of one alum to five salt.

WORMS IN HOGS.—A correspondent sends the following worm remedy: One teaspoonful of arsenic in a common pail or bucket full of swill, fed to three or four 150-pound hogs.

PRUNING GRAPE VINES.—Grape vines may be pruned any time now when they are not frozen. Remember it is last year's wood which sends out the bearing canes of this year; then you will know how many buds to leave. If the vines are grown for fruit only, they should be pruned back to two or three buds; if for shade as well as fruit, then let the canes be as long as desired. Young vines must be pruned closer than old ones. Under four or five years of age, a vine ought not to bear heavily; they should be pruned back, or the new buds should be rubbed off as they appear in the spring.

Regulating Prices.

EDITOR KANSAS FARMER:—I could not, after reading J. G. Otis's article in January 17, refrain from writing. I have been a farmer but a short time, but have known the following facts a long time:

That the farmers will allow the men of our great cities to organize into what is called a "board of trade," and this board of trade makes prices on all farm produce of whatever kind, whether it is below the cost of producing or not, makes no difference.

A farmer goes into a store, he will ask, what are you paying for corn, potatoes, butter, eggs, or whatever he may have to sell; if he wants to buy he asks, what do you charge for coffee, tea, calico, etc., etc.? This what will you give and what will you take, should be on the books as a thing of the past. If the men who manufacture hardware, machinery, etc., make their prices, surely the farmer would have the right to make prices on all of his own products. This is not unfair. But there is one great obstacle to overcome, and that is only one simple word—unity. If the farmers can be induced to unite and hold firmly together, my friends, J. G. Otis's schedule prices can and will be realized. Otherwise, it can not be accomplished. WM. KINNE.

Ontario, Jackson Co., Kas.

Assessor's Salaries—Redemption.

EDITOR KANSAS FARMER:—I agree with the correspondent in the matter of County Assessors, and I do earnestly protest against the new plan, as the Trustee plan is satisfactory to the people generally, and I think that the farmers ought to see that such County Clerks as went to Topeka for the sole purpose of taking away what little rights the farmers now have left, that when their term expires they should be left out and new men put in office who will let well enough alone.

I see there will be an effort to reduce the salaries of County Clerks, Treasurers and Registers of Deeds. That is right, for the fact of the pay of a County Treasurer's pay being greater than the Governor's pay is not right, and there are many County Treasurers who draw more than three thousand dollars a year for their work.

Mr. Editor, I am well pleased with your explanation of the redemption of farms, after sale has been made; it is right, and no honest man ought to object unless he is determined to have the farm he holds a mortgaged one. E. A. E.

Whiting, Jackson Co., Kas.

Horticulture.

THE APPLE ORCHARD.

Extracts from a paper read by A. H. Buckman, before a Farmers' Institute at Oak Grange hall, Shawnee county, February 15, 1889.

Soil.—It should be a good limestone soil, with some indications of iron, and a moderately porous subsoil. Our prairie lands have had its growth of grass and weeds burnt over for centuries every year, or at least every few years; consequently the soil is well supplied with the contents of ashes. If the subsoil is all right, it is the best land that can be found for growing tree fruits—far better than timber lands which have never received the benefits derived from ashes.

Some kinds of apple trees require a richer soil than others, those of a naturally slow growth will bear a very rich soil; they are mostly of a fine twig, such as Red June, Shockly, Northern Spy, Limber Twig and others. Some kinds by making too much growth are liable to be injured by extreme changes of heat and cold. Those are such as have a thick twig, as Fallawater, Ohio Nonpareil, King's, Smoke House, Baldwin, etc.

Roots Duplicate Top.—Habits, growth of apple trees indicate that a difference in subsoil is required. Roots duplicate the top in form to a great degree, except roots extend much farther. Rambo, McAfee Nonsuch, Lawver, Falton, etc., all trees that grow extremely high root deep in the ground, and receive moisture and nourishment accordingly. Maiden's Blush, Jonathan, Greening, Rawls Genet, Smith's Cider, etc., with low-spreading tops, receive most nourishment near the surface. Those kinds will do best on a moderately hard subsoil, if it is not too close to the surface. In this section of country many winter varieties fall before properly matured or time for picking winter keepers. Location and soil will obviate this trouble to some extent, in changing the time of ripening, and quality of the same kind of apple. The old idea that roots extend the length of limbs from body of tree is a mistake here in Kansas. Three times as far is probably nearer correct. Scarcity of moisture, no doubt, causes extension of roots in all kinds of trees and vegetable plants. If I am right in regard to roots, then trees require a greater distance apart than the Kansas orchard is planted. No doubt many of you have heard what nurserymen, agents and tree-dealers have had to say about whole-root grafted stock. They claim a better and hardier tree, which is a humbug and intended to deceive the honest tiller of the soil, who allows other people to do his investigating and thinking. All the growers know that the crown or first graft of root is the surest to grow, the connection being natural, the chances for a number one tree diminishes as the number of grafts are made from the same root. Roots, long or short, all kinds, will adapt themselves to suit the natural formation of the tree, and cannot be changed in the grafting.

Crab Roots.—Crab apple root trees is another fool catcher. The nearer a natural connection in growth of trunk and root the better, unless dwarf or short-lived trees are wanted. Trunk and crown are the weak points of a tree.

Budding.—Budding the apple to insure hardiness has caught a long string of suckers, and most probably was started in order to sell inferior trees that had been killed down to the ground by a severe winter. Sprout comes up at the ground; cut injured top off; one year's growth will show to all appearance a fine budded tree. My advice is, be very careful in buying all kinds of

budded trees, for a sprout on a stump is calculated to deceive.

In preparing land for trees plow deep and pulverize the ground well. The Kansas way of throwing out a few furrows and letting it dry, place a tree in the ditch on hard ground, and cover up the roots with dry clods has proven a failure. Plant good, healthy, two-year-old trees of medium growth; trim off all forks and large limbs that will rob the main upright leader; encourage growth on the south side, and check it on the north. See that your trees have not been injured by a cold winter. See that the roots are clear of the woolly aphid or root-louse; see that the roots of your trees are not dry for a minute; see that your trees are free from borers; see that roots are spread out evenly in all directions when planting, and that nothing but fine moist earth comes in contact with them; make cuts at end of large roots, smooth and pack earth on them solid; plant crown of tree some four inches under the ground. Cultivate thoroughly from six to ten years after planting, not deep to mutilate roots, or late in the season to stimulate late growth. Sow no small grain in the orchard. Trim your own trees every year, go over them twice in the season while small, any time except August. If large limbs are to be removed do it when the leaves begin to grow. Watersprouts should be removed in the fall.

Trunk.—As to length of trunk of apple trees people will differ.

Three feet is a very good trunk with some kinds; two will make the better tree. Those that grow slender limbs and upright top, you will have trouble with in keeping the trunk straight and sound, and the top well balanced, which is required for a long-lived tree. Low-top trees are handy when it comes to picking and saving fruit from bruises. To trim as it should be done, we should understand from the setting of the tree, its habit as to growth of top, and productivity, and always keep in mind that it is easier to cut off two limbs that should not be, than to grow one where one should be. The flat-headed borers destroy no healthy trees when the body is shaded by the top. When you quit cultivating, seed to clover and let it remain on the ground. When trees show decline in vitality, top-dress with manure, waste no time in discussing what kind; use any kind, long or short and plenty of it, spread all over the ground. When limbs or trees begin to die, cut out and burn if it takes the whole orchard, for they will cease to be profitable; prepare to plant another and be guided by past experience.

FRUIT CULTURE.

Some extracts from a paper read before the Wellington Farmers' Institute, February 16, 1889, by Geo. W. Bailey.

Some men who in most matters on the farm are successful and all right in the cultivation of all kinds of grain, in growing fine hogs, horses, and cattle, when it comes to horticulture are total failures. These farmers think it no hardship to curry and brush the body and legs of their horse a dozen times a week, but would think it a heavy burden to wash the single stem of an apple tree twice in twelve months. Our children are taught to milk and feed the cows, herd the cattle, tend the hens and gather the eggs; but how many boys or girls, of any age, can go into the orchard, cut out a borer, insert a bud, stick on a graft, or layer a grape vine with any sort of skill?

If the farmer or any one else would reach the very best and highest success in horticulture, he must love trees and plants, must love to look at them, to walk among them, and to visit them as friends and companions, to enquire into their wants and requirements, and

to administer to their wants as living things.

If a man loves a tree for its beauty, for its shade, for its fruit, and for its company, and loves to study varieties and habits of plants and trees, then he has the elementary qualifications for a successful fruit-grower. Such a man will soon learn to do his own observing and his own thinking. In buying trees he should consult those in his neighborhood who have had the most experience and been the most successful in fruit-growing, obtain all the information possible in regard to apples and other fruits that he may wish to plant; then, if it is convenient, go to the nursery and select your trees and plants. Two-year-old apple trees are better than three-year-olds; one-year-olds are better than four-year-olds. Plum, pear, peach and cherry the same. Good one-year-old grape vines are better than at any other age. Gooseberry, blackberry and raspberry same as grape vines. Keep the roots moist and covered from the time of taking up until the time of setting out. Trees consist of roots, stems and tops; the roots are to go into the ground and represent the chances for life; the tops are to be exposed to the weather, to the insects and all the enemies of plant life. Other things being equal, then, the more and better the roots and smaller the amount of tops the more certain the trees are to grow when set out. The first point is to cause the trees to unite with the ground as they were united with the soil in the nursery. Any ground that will produce a good crop of corn or potatoes is suitable for an orchard. The ground for each tree should be well plowed or dug, and a hole opened for the reception of the tree. The tree should be placed as deep as, or a little deeper than it stood in the nursery. When the roots are well covered with the best soil and the hole is about half filled with dirt, one or two pails of water should be poured in the hole and allowed to soak away. This unites the soil about the roots better than any other process. After the water has thoroughly soaked away, the hole should then be filled up level with the surface of the ground, or nearly so. After this the trees should be thoroughly cultivated as long as weeds continue to grow.

In a commercial orchard of 1,000 trees, I would plant 400 Missouri Pippin, 400 Ben Davis, 100 Red June, 100 Early harvest. If for family use, then suit your own taste, choosing flavor and quality rather than quantity and color, like Rawle's Genet, Rambo, Maiden's Blush, etc. Tastes differ, but men in the market usually buy apples with their eyes, choosing size and brilliancy of color instead of quality. Let the main crop for market be good winter apples, with a heavy proportion of the latest keepers. Late keepers, running into the spring and summer of the next year, always have the longest and best market, and the least competition with other fruits. They also stand shipping best, and thus have a wider market, giving the producer a chance to choose the best markets.

The main requisite in tree and fruit culture is in the man.

Orchards in Reno County.

EDITOR KANSAS FARMER:—I have been trying for a number of years to establish an apple orchard here, with poor results thus far. My first purchase of trees was from a resident nurseryman, from whom I also bought some box elders, he having at that time a large grove of them on the south of his orchard; those apple trees are now all dead but one, which is doing well. Other plantations of apple trees fared nearly

the same. I have gathered wagon loads of apples from old trees in Illinois, but never had the care of a young orchard before, and at first attributed my losses to the dry weather, the location being high upland, soil sandy clay, with a very stiff clay subsoil. I had then to make my first acquaintance with the flat-headed borer, which I soon found to be the disturbing cause. There is no native timber in this county to supply such pests, and I now find the box elder, which has been doing well on my place, is a hot-bed for borers. Last winter I took sections of the main stem of some apple trees, also of branches of the box elder containing these borers in the pupa state, placed them in bottles in the house, where they completed their transformations about the middle of May, the beetles resembling each other so closely, I judged them to be the same.

There has been thousands of dollars lost here in young orchards. Some say dry weather is the cause, while others, finding themselves outdone by the numbers of the insect pest, say they will plant no more apple trees. I understand that at the last meeting of the State Horticultural Society a bill was drawn by the Committee on Entomology, but not acted upon by the board, tending to the suppression of the box elder from the State. I have just dug sixteen borers out of one limb of box elder, one and one-half inches in diameter at the base, which at first sight appeared to be healthy. Now is a good time to dig up these trees and others substituted. Let the matter be discussed.

E. PROUTY.

Arlington, Reno Co., Kas.

Cultivation of Fruit.

By Geo. D. Armstrong, and read before the Wellington Farmers' Institute, February 16, 1889.

The question for discussion is like most questions that are presented to the farmers of Kansas, that of pay.

This appears to be the leading question of the times. When any enterprise is presented to a man and he is called upon to engage in it or to devote time, labor or money in it, the first and leading inquiry is, "will this thing pay?" Will it pay to do this? or will it pay to engage in that? is the first and uppermost thought. And without at least a fair prospect of pay, it is out of the question to induce a man to take hold of anything.

So that this question of pay is one of importance in regard to the cultivation of fruit.

Then will it pay the farmer to cultivate fruit? All over this country we can find farmers who can testify, that it does not pay to invest money in fruit trees and not cultivate them. Too many of us have tried that. There is no pay in non-cultivation. Fruit will not grow on trees left to the care and mercy of our rabbits, weeds and stock. But with the necessary information—which can now be obtained, as to the kind of fruit to cultivate and the best variety suited to our locality, climate and soil, a man is more certain of pay in the cultivation of fruit than from most anything else.

Does it pay the farmer to buy high-priced fruit, when he can grow it at home? Or will it pay to let his family do without it when he can have all he needs growing at his door? We think not. We do not hesitate to say and that with emphasis, that the cultivation of fruit pays the farmer better and in more ways than anything he can cultivate.

It gives health and exercise to the boys while cultivating and tending the trees. It gives health to the family to have plenty of good fruit the year round.

In ten years we have had ten crops of

grapes, eight of blackberries and six of cherries. If you want to know just what to put out and cultivate, do not consult an itinerant tree peddler, but go to the man in your locality that has a good orchard and plenty of fruit—and we have a few such men—and he can successfully grow the apple, pear and peach. That is settled. And while we may not have a crop of each of these every year, we are certain to have one or the other. And as to small fruit, they are even more certain. Grapes every year. Blackberries and cherries almost every year.

Who does not love to see healthy, rosy-cheeked children, or love to eat the rosy-cheeked apple? And with a little extra attention our Kansas soil will produce abundance of each. It gives dollars to the pocket-book, if we have more than is needed for the use of the family. We all know that fruit is high, and will be for years to come.

Fine, choice fruit will always demand a high price. But you will find that it is like raising fine stock of any kind, it must have care and attention and cultivation. The kind and variety of fruit to cultivate, in order to derive the largest amount of pay is of vital importance in this discussion. It is no longer a question as to whether or not we can tell you what to plant, how to plant, and when to plant. Select only what has proven to be a success in this climate and soil, give it good care, fair treatment and clean, thorough surface cultivation, and my word for it, you will reap a harvest of fruit that will pay you for all you have invested in it.

Patrons' Department.

The KANSAS FARMER wants to aid every worthy movement which has the agricultural interests in view. In that spirit we have granted the use of a column every week for the Patrons of Husbandry, to be used by them in their own way and for their own purposes. The State Lecturer, John G. Otis, will have charge of it for the present. This week he presents the following:

Washington's Birthday.

The 22d of February will always be a day held in remembrance by the patriotic American. Our Grange organization may well celebrate this as an annual holiday. Washington was a true Patron of Husbandry, and about the only President we ever had that could be properly called a genuine Granger. He fully exemplified that principle laid down in our declaration of purposes, "that the office should seek the man and not the man the office." He was first elected President 100 years ago last month, and was inaugurated on the 30th of April following. He served eight years and declined to serve a third term. In his farewell address we find these memorable words: "I have already intimated to you the danger of parties in the States, with particular reference to the founding of them upon geographical discriminations. Let me now take a more comprehensive view, and warn you in the most solemn manner against the baneful effects of the spirit of party generally. * * * It serves always to distract the public councils and enfeeble the public administration. It agitates the community with ill-founded jealousies and false alarms, kindles the animosity of one party against the other, foment occasional riot and insurrection. It opens the door to foreign influence and corruption, which finds a facilitated access to the government itself, through the channel of party pas-

sion." These are words that might well be heeded by every true lover of his country to-day. The patriotic American citizen, with a free ballot, has no need of a party boss to tell him how to vote. Flambeau clubs and plug hat orators only confuse and mislead the multitude.

The following truthful words are drawn from the February number of *The Canton*:

DON'T FORGET

That it is much easier to let cows shrink in their milk than to persuade them to swell.

That good blood is the foundation of profitable cow-keeping, and good care must always go with it.

That if a cow just pays for her feed in milk and butter she is kept at a loss.

That this loss is greater with every succeeding year.

That the business of dairying always pays; when it don't pay it isn't business.

That the cow begins life as a calf.

That you can point that calf cow-wards or steer-wards.

That if you have the beef idea of a cow, you had better grow your cows from boy calves.

That you forgot last fall to provide plenty of bedding for your cows.

That in consequence the milk sometimes had a "cowy" odor.

That you attributed it to some kind of weed or hay.

That your neighbor has built a silo, and it is your duty to watch and see how the thing works.

That when you go to see him you must leave your prejudices at home.

That you had better put said prejudices with your worn-out clothes, and never wear any of them again.

That you had better take your wife with you; she may possibly see some things that you can't.

That a pound of fine butter is worth 30 cents, and a pound of "store" butter 15 cents.

That the difference in price is a matter of dairy knowledge.

That you can get this knowledge by reading and thinking.

The Lecturer of K. S. G. Patrons of Husbandry, leaves for Johnson and Miami counties on the 22d inst., and will not return before March 10.

Woman's Work.

The National Grange at its recent meeting appointed a committee of three ladies to look after woman's work in the Grange. The committee consists of Mrs. Addie Hale, wife of J. H. Hale, master of the Connecticut State Grange, Mrs. S. L. Hayes, of Oregon, and Mrs. M. S. Rhone, of Pennsylvania. Mrs. Hale writes regarding the plans of the committee as follows: "Our plans are hardly made yet, but this committee will be in correspondence with a corresponding committee in every State appointed by each State master, this committee in turn to be in correspondence with like committees in the subordinate Granges, appointed by the masters. Our plan is to work for the good of the order, sending suggestions and cheering words from time to time and to help on the good work in every possible way. We shall suggest to the Flora, Pomona and Ceres that they use their office to educate the Patrons in the new flowers, fruits or grains. That they always have on their tables specimens and ask all members to contribute, and be ready to point out the special points of interest. This committee in the subordinate Grange might be leaders in looking after the absent ones, trying to find why the interest is not kept up in the Grange, etc. It seems to us that there is a great deal of work these sisters might do, and we would ask all in-



"WHAT MEDICINES ARE MOST CALLED FOR?"

asked the reporter of an old druggist.

"Dr. Pierce's preparations," he replied. "They are put up by a physician of great skill and experience and are perfectly reliable, and sold under a *positive guarantee*, that they are what they purport to be. They are not 'patent' medicines, but the well-tested, favorite prescriptions of an experienced and skillful physician. His 'Favorite Prescription,' for all those chronic weaknesses, nervous and other derangements peculiar to women, is used with unfailing success. It cures weak back, bearing-down sensations, irregularities and weaknesses common to the sex, and being the most perfect of tonic medicines builds up and strengthens the entire system. Besides, it is sold by us under the manufacturers' *guarantee* of satisfaction in every case, or the money paid for it is promptly refunded. The demand for it is constant, and I am conversant with scores of cases cured by it," concluded the dispenser, as he left the itemizer to wait upon a lady who called for the popular medicine.

Returning after a few moments, the venerable wielder of the pestle remarked, "the number of sarsaparillas and other, so-called, 'blood medicines' is legion; but Dr. Pierce's Golden Medical Discovery outsells them all and it is the only blood-purifier, out of the many which I am obliged to keep upon my shelves, that is *guaranteed* to benefit or cure in all cases of diseases for which it is recommended, or money paid for it is refunded."

"In the line of Pills" remarked the old gentleman, "the little Sugar-coated 'Pellets' put up by Dr. Pierce lead all others, both in amount of sales and the general satisfaction they give my customers." At this point the interview was cut short by the appearance of more customers for the wonderful medicines of Dr. Pierce.

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interested to favor us with suggestion, which we will be very glad to receive and use."—*New England Homestead*



Aching Sides and Back, Hip, Kidney, and Uterine Pain. Rheumatic, Sciatic, Sharp, and Weakening Pains, relieved in one minute by the *Cuticura Anti-Pain Plaster*. The first instantaneous pain-killing strengthening plaster. 25 cts.; five for \$1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON.

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SALESMEN We wish a few men to sell our goods by sample to the wholesale and retail trade. Largest manufacturer in our line. Enclose 2-cent stamp. Wages \$3 Per Day. Permanent position. No postals answered. Money advanced for wages, advertising, etc. Centennial Manufacturing Co., Cincinnati, Ohio.

WANTED COLONISTS Money advanced to Eastern people for railroad fare and expenses of trip from any point east of the Rocky Mountains, to visit The Great Wilber Colony Property, Sacramento Valley, Cal. City lots and California Fruit Tracts FREE. \$500, \$1000 or \$2000 loans will be made through our Eastern General Agent for improvements on 5 years' time at 5 per cent. Send 10c postage for maps, plats, etc. Address W. H. WHETSTONE, Eastern Gen. Agt., Cincinnati, O. P. O. Box 825.

WHICH? BUTTER OR CHEESE. If either, or both, send for J. S. CARTER'S Illustrated Catalogue, which gives full information of latest and best method and appliances for making Cheese or Butter, from the largest factory to the smallest dairy. Carter's Cream Catering System of Butter Making is a Success. JOHN S. CARTER, Syracuse, N. Y.

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

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

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

THE MARKETS.

By Telegraph, February 25, 1889.

LIVE STOCK MARKETS.

St. Louis.

CATTLE—Receipts 400, shipments 1,300. Market steady. Choice heavy native steers \$3 50a3 75, fair to good native steers \$3 00a3 30, medium to choice butchers steers \$2 70a3 25, fair to good stockers and feeders \$2 25a3 30.

HOGS—Receipts 2,800, shipments 3,000. Market stronger. Choice heavy and butcher's selections \$4 50a4 55, medium to prime packing \$4 40a4 50, ordinary to best light grades \$4 45a4 50.

SHEEP—Receipts 500, shipments 700. Market strong. Fair to choice \$3 60a5 25.

Chicago.

CATTLE—Receipts 11,000. Market steady. Best \$4 07a4 35, good \$3 60a3 90, medium \$3 20a3 50, common \$3 00a3 20, stockers \$2 35a2 75, feeders \$2 75a3 40, bulls \$2 00a3 25, cows \$1 15a3 20.

HOGS—Receipts 18,000. Market 10c higher. Mixed, \$4 50a4 70; heavy, \$4 55a4 70; light, \$4 50a4 80; pigs, \$4 40a5 00.

SHEEP—Receipts 10,000. Market steady. Native sheep, \$3 00a5 15; Texas, \$3 00a4 50; lambs, per cwt., \$4 90a6 00.

Kansas City.

Receipts for 1889 to date are 140,617 cattle, 319,174 hogs and 64,809 sheep, showing a gain of 50,561 cattle, 21,000 hogs loss and a gain of 29,884 sheep, compared with 1888.

CATTLE—The supply of cattle was liberal with over 3,400 fresh. The best heavy cattle, which reached the lowest point on record last week at Chicago, were very dull. Dressed beef men were very good buyers for their styles—cows, heifers, bulls and light to medium steers. Over 1,500 were sold by noon. Where sellers wanted and expected to get around \$4 00 for cattle, they were bid about \$3 60a3 65 and nobody anxious to buy. Trade was very dull and only a few of the heavy cattle were sold at noon. The export trade is demoralized, which accounts for the dullness and unprecedented cheapness. Light cattle on the other hand were in fair demand and a good many had been sold by noon. Prices were generally slightly better than low day of last week but in some cases no better, and after early buyers filled up they were weak as well as heavy. Dressed beef and shippers, \$3 15a3 50; cows and mixed, \$1 55a2 90.

HOGS—The supply was about 8,700 fresh and 1,000 stale. The bulk of the business was at \$4 37a4 42½ against \$4 35a4 45 Saturday. At the low time some sales were made at \$4 35a4 37½, and toward the close, which was stronger, the best sold at \$4 42½a4 45. Weights out little figure and both sorted light and heavy sold as high as \$4 45. Tops Saturday, \$4 50 for a single load of light.

SHEEP—\$2 82a4 12½.

PRODUCE MARKETS.

New York.

WHEAT—Dull, ½c lower No. 2 red, 97½a99½c. **CORN**—Steady and quiet, closing easy. No. 2, 43½c.

OATS—Stronger. Mixed, 28½a28¾c; white, 34a39c.

COFFEE—Options steady. Sales, 65,250 bags. Spot, 17½c.

SUGAR—Quiet and easy.

EGGS—Fair demand; firmer at 15a15½c.

BUTTER—Steady at 13a20c.

CHEESE—Quiet and easy at 10a11½c.

St. Louis.

FLOUR—Quiet and unchanged.

WHEAT—Quiet and lower. No. 2 red, 96½c; May, 94½a99½c; July, 85½a86½c.

CORN—Quiet and unsettled. No. 2 mixed, cash, 27½a27¾c; March, 27½a27¾c; May, 30½a30¾c.

OATS—Firmer. No. 2 cash, 24½c; May closed at 27½c bid.

RYE—No. 2, 45c.

HAY—Dull. Prairie, \$6 00a7 50; timothy, \$1 12a2 50.

CLAXSEED—\$1 50.

BUTTER—Quiet and steady. Creamery, 24a26c; dairy, 20a22c.

EGGS—Guaranteed stock, 11½c.

PORK—\$11 75.

LARD—Nominal at \$6 65.

Chicago.

A moderate business was transacted in wheat and the feeling was weaker with prices averaging somewhat lower all around. Domestic markets were all weaker. Minneapolis, which has been 5a7c over Chicago, is now selling on par with Chicago prices. Reports were also received of rain in California and that the winter crop in the South and Southwest were looking better.

Corn was quiet and steady all day, trading being rather light and almost entirely local. There was nothing new of importance developed and fluctuations didn't show much change from those of Saturday.

Cash quotations were as follows:

FLOUR—Firm, unchanged. Winter wheat patents, \$5 00a5 55; spring wheat patents, \$4 60a5 15; bakers, \$4 75a5 20.

WHEAT—No. 2 spring, 1 04½; No. 3 spring, 1 08a9c; No. 2 red, 1 04½.

CORN—No. 2, 34½a34¾c.

OATS—No. 2, 25½c.

RYE—No. 2, 43½c.

CLAXSEED—No. 1, \$1 45.

TIMOTHY—Prime, \$1 42a1 43.

PORK—\$11 05a11 10.

LARD—\$6 75a6 77½.

BUTTER—Steady. Fancy creamery, 27a28c; choice to fine, 20a22c; fine dairy, 20a22c; good choice, 10a20c.

EGGS—Steady at 13a13½c.

Kansas City.

WHEAT—Receipts at regular elevators since last report 2,725 bushels; withdrawals, 8,834 bushels, leaving stock in store as reported to

the Board of Trade to-day, 173,670 bushels. No. 2 red winter: Cash, no bids, 9½c asked. **CORN**—Receipts at regular elevators since last report, 13,731 bushels; withdrawals, 500 bushels, leaving stock in store as reported to the Board of Trade to-day, 241,658 bushels. No. 2: Cash, no bids, 24c asked. **OATS**—No. 2 cash, no bids, 21½c asked. **RYE**—No. 2 cash, no bids, 42c asked; February, no bids nor offerings. **HAY**—Receipts 7 cars. Firm. Strictly fancy prairie, \$5 00; good medium, \$3 00a3 50; poor, \$1 00a1 50. **SEEDS**—We quote: Flaxseed, \$1 40 per bu. on a basis of pure. Castor beans, \$1 50 per bu. for prime.

ANY VARIETY

Of Seed Potatoes, Corn or Oats now grown in the United States, only \$1 per bushel. Sample pound of any variety 25 cents prepaid. Compare prices with those in any catalogue. W. M. WOODWORTH, Milford Centre, O.

Bond's Best Seeds.

Choice Garden Seeds. Shrubs, Apple Trees and Small Fruits. 47 leading varieties of POTATOES. The wonderful NEW BLACK BARLEY; we also 68 pounds to measured bushel; sample packet 10 cts. Catalogue free. C. S. BOND, Worthington, Minn.

SEEDS! CORN SEEDS!

NEW COOK CORN: Great yielder and withstands drought remarkably. Seed Wheat, Oats and Corn. Choice Garden Seeds. Catalogue free. W. S. DELANO, Seedsmen, Lee Park, Nebraska.

KANSAS HOME NURSERY

BEST HOME-GROWN TREES. Choice Fruit and Ornamental Trees of real merit for the Western Tree-Planters. Also best Fruit and Flower Plants. Water-proof. Samples by mail, 10 cents each; \$5 per 100, by express. A. H. GRIESA, Drawer 23, Lawrence, Kas.

Red Cedars! Hardy Catalpas!

FOREST TREE SEEDLINGS—all kinds, Fruit Trees and Plants, Mammoth Dewberry; Black Walnuts, \$1 per barrel. Lowest prices, largest stock! Write for free Price Lists. Address: GEO. C. HANFORD, (Successor to Bailey & Hanford), Makanda, Jackson Co., Ill.

Lee's Summit Nurseries

APPLE TREES TWO AND THREE YEARS old, of most excellent quality, offered at low rates by the 1,000 or by the carload. Also Peach, Plum, Grape, etc., etc. J. A. BLAIR & SON, Proprietors, Lee's Summit, Jackson Co., Mo.

Bulbs!

12 Large White Double TUBEROSE, 3 CANNAS—Mixed Colors, 3 GLADIOLA—Mixed Colors, By mail, postpaid, for 50 cents. Order early. H. M. HOFFMAN, (Rosemeade, DeSoto road), Leavenworth, Kas.

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ENLARGED AND IMPROVED. A hand-some book of 168 pages, hundreds of illustrations and beautiful COLORED PLATES, painted from nature; tells all about the BEST SEEDS.

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FOR 20 CENTS (sent in stamps) we will mail the FARM ANNUAL and one liberal packet each of Burpee's New Sweet Peas, and our Fordhook Largest-flowered Phlox, OR one package each of New Greek Winter Onion, long keeper, delicate flavor. Mid-Summer Lettuce of most superb quality, and the new Matchless Tomato. Both Vegetables and Flowers, six grand varieties of unequalled merit, mailed (with the Farm Annual) for 40 cts. in stamps. We want everyone who orders our New Catalogue, also to try our Warranted Seeds.

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Many desirable novelties in Flower and Vegetable Seeds, including the Alligator Potato, Golden Pod Wax Bean (never known to rust or spot), Lorillard and Prelude Tomatoes, Improved Egyptian Beet, Clipper Peas, Bush Lima Beans, Triumph Aster, Perfection Pansy, Mammoth Verben, Boston Beauty Sweet Peas, etc., etc., also all the standard sorts. Our catalogue, 116 pages with choice illustrations and tinted plate, will be sent on receipt of 10 cents, which may be deducted from the first order, if name of this paper is mentioned.

W. W. RAWSON & CO.
34 So. Market Street. BOSTON, MASS.

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Choice Novelties in Vegetable and Flower Seeds

with all the standard old sorts. The best inducement I can offer for your trade is the fact that I always test the vitality of my seeds, rejecting all worthless stock. Send for my illustrated and enlarged catalogue and give me a trial this season.

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FOR THE **MARKET GARDEN**

Are acknowledged to be THE BEST. No failure when they are used. You cannot afford to be without our **Illustrated CATALOGUE FREE** containing all the **NOVELTIES** in Vegetables, Flowers, and Field Grains, Oats, Wheat, Potatoes, etc. Address: **S. F. LEONARD, 149 W. Randolph St., CHICAGO, ILL.**

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Have 10,000 pounds each of Kaffir Corn, White and Yellow Milo Maize. Choice Seed Corn a specialty. Everything in Garden, Field and Tree Seeds. Illustrated Catalogue Free. Send for one.

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GRAPE VINES, FRUIT and ORNAMENTAL TREES

CHOICEST OLD. RAREST NEW.

Among the latter we introduce the **CRAWFORD STRAWBERRY**. **YOU WANT IT!** It combines more good qualities than any other. for ORCHARD, GARDEN, LAWN or PARK, send for our **VALUABLE FREE CATALOGUE** containing about 140 pages with hundreds of illustrations. **IT'S A BEAUTY! ORDER DIRECT.** Get the best at honest prices, and save all commissions. Thirty-fifth year; 24 greenhouses, 700 acres.

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This manual we mail to any address on receipt of 25 cts. (in stamps). To all so remitting 25 cts. for the manual, we will at the same time send free by mail, in addition, their choice of any one of the following **Splendid Novelties**, most of which are now offered for the first time, and the price of either of which is 25 cts.: One packet of Autumn King Cabbage, or one pkt. of Yosemite Mammoth Wax Bean (see illustration), or one pkt. Delmonico Musk Melon, or one pkt. Giant Pansy, or one pkt. Scarlet Triumph Aster, or one pkt. Sunflower "Silver and Gold," or one plant of the climber Blue Dawn Flower, or one plant of the White Moonflower, or one Bermuda Easter Lily, or one plant of either a Red, Yellow, White, or Pink Everblooming Rose—on the distinct understanding, however, that those ordering will state in what paper they saw this advertisement.

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SEED SWEET POTATOES—3,000 bushels, eight best varieties—first-class—for sale.
N. H. PIXLEY, Wamego, Kas.

SEED SWEET POTATOES—A large quantity of seed and eating sweet potatoes. Plants in season.
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TREES Root-Grafts—Everything! No larger stock in U. S. No better, no cheaper.
PIKE CO. NURSERIES,
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Seed Sweet and Irish Potatoes.

I have also the following varieties of Strawberry Plants—Minor, Crescent, James Vick, JUNIUS UNDERWOOD,
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Fruit and Ornamental Trees, Vines, Plants and Shrubs.
Cherry Trees and Small Fruit Plants a specialty.

GRAPE VINES CONCORD WORDEN!

With other varieties, Evergreens, Forest Tree Seedlings, with a general Nursery Stock.
Eighteenth year. Send for Price List.
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STRAWBERRY PLANTS! 777,000
CRESCENT & CAPT. JACK FOR SALE.
5,000 Jessie and BUBACH. Forty other varieties.
Berries. Price List free. B. F. SMITH,
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IS AT THE FRONT
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SMALL FRUITS, S. C. BROWN LEHIGH FOWLS, POLAND-CHINA SWINE and FANCY ORNAMENTAL BUTTER.
Send for prices. T. F. SPROUL,
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STAYMAN'S No. 1 Strawberry. Large and fine. Produced at the rate of 30,000 quarts per acre. Price, \$2.00 per dozen; \$10.00 per 100.
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STAYMAN & BLACK,
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Established 1865. 460 Acres. Full line of Nursery Stock. Forest Seedlings for Timber Claims and Apple Trees for Commercial Orchards a specialty. Large Premium for planting forest trees in spring of 1899. Treatise on cost and profit of apple orchard, free on application. Good salesmen wanted.

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MESSRS. DIXON & SON, PROPRIETORS.—Have for sale 40,000 Raspberry and 150,000 Strawberry Plants of tested varieties. Raspberries—Ohio, Southerland, Gregg and Nemaha, \$1.25 to \$2.50 per 100, or \$10 to \$15 per 1,000. Strawberries—Crescent, Minor, May King, Bubach, Summit and Windsor, 75 cents to \$2.50 per 100, or \$4 to \$15 per 1,000. Send orders early, and always mention KANSAS FARMER. Descriptive price list furnished free.

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Our twentieth year in the business in the county. For the spring trade, a full line of all kinds of Nursery Stock at prices that will please. We have a large lot of 2 and 3-year Apple Trees that must be sold, as we want to use the ground for other purposes. We are putting up No. 1 Apple Grafts of clones of the most select varieties of apples that are a success in Kansas. Will fill orders from one to 50,000 at low figures. Correspondence solicited. Hedge, half a million. Grape vines in quantity and variety. For particulars, write and send for free Price List.
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—OF—

Fruit Trees, Shade Trees, Small Fruits.

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TEN MILLION FOREST TREE SEEDLINGS.

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ONE HUNDRED THOUSAND TWO-YEAR APPLE TREES—Grown from whole root grafts.

FIVE THOUSAND IRISH JUNIPERS—Two-foot, SPLENDID WALNUTS, and other forest tree seeds and nuts, prime and fresh.

Full instructions sent with every order, and perfect satisfaction guaranteed. Send for full list and prices. Address

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379 VARIETIES OF FRUIT TREES, VINES, PLANTS, ETC.
Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for Catalogue
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800 ACRES. 13 GREENHOUSES. TREES AND PLANTS

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PLANTS of best quality, warranted true to name, lowest price, and largest assortment of old and new varieties. At dozen rates, free by mail. Special attention called to promising novelties. Send for price list.
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SEEDS THAT WILL GROW
VEGETABLE GARDEN, FLOWER GARDEN,
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FRESH AND PURE.

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FOR 1899

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of the largest and most reliable house, and they use

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Mention this paper.

Bless Your Souls! My brother farmers, why pay 10 or 20 cts. for a seed catalogue, when you can receive one containing just as many and very probably more varieties and all new vegetables that are really valuable, for just NOTHING! It may have less paint about the covers, but great Scott! we are not after paint, but seed, fresh and true to name, such as will make with a master's hand its own picture all over our farms and gardens; seed I am not afraid to WARRANT on the cover of my catalogue. Come, my fellow farmers, and join the thousands, who for thirty years have been users of my seed; why, we were a goodly company and having pleasant times together before the great majority of the present race of seedsmen (bless the boys!) had left their farms! Send for a catalogue.

JAMES J. H. GREGORY, Marblehead, Mass.

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WHEAT, OATS, POTATOES, HOW TO GROW THEM, FREE!

The Busy Bee.

Feeding Bees--Bee-Hives.

A correspondent asks: How is the best way of feeding bees, and what to use for food? I have a colony that is weak and will need feeding. What is the best bee-hive for all uses?

In reply to above, if it is a movable-comb hive (no other should be tolerated), I would remove two or three combs from the colony and fill them with sugar sirup made from granulated sugar. This we do by holding combs over a dish-pan and pouring the sirup on them until filled. Sirup should not be too thick or it will not enter the cells readily. When combs are filled, return them to the hive at dusk; this is to prevent robbing. If there are other bees in your locality, this will cause you trouble, as robbing in the spring is one of the worst things we have to contend with. The best cure we know of is to be careful and never let it get started by feeding in the daytime or leaving any honey or feed around loose where the bees can get at it. We have tried most all kinds of feeders and ways of feeding, and prefer the above.

As to the best hive, in my opinion that is a good deal of a fancy. Be sure and choose a hive that the standard surplus arrangements and sections will fit it. More of the Langstroth hives are used than all others. I use a frame 10x12½ inches, twelve frames to the hive. I like it better than the Langstroth hive, simply because the frames handle easier to me, while another might prefer the Langstroth hive for the same reason. I have often thought it is not so much in the style of hive or the race of bees when it comes to success as it is in the bee-keeper.

Bees are carrying in pollen from the maples to-day, February 15. This is the earliest by nearly three weeks of any on our record. M. F. TATMAN.
Rossville, Shawnee Co., Kas.

White oak firkins are recommended as best in which to make cucumber pickles, and next to that stoneware.

A correspondent of the *Orange County Farmer* says he raised a crop of sixty bushels of potatoes and eighty bushels of turnips on half an acre of land last season.

The *Husbandman* says pasturing meadows in the fall not only lessens the fertility of the soil but leaves the roots unprotected, and causes the ground to heave more easily in the winter.

In 1820 two hills of an area of about 800 acres, of almost no agricultural value, on the property of Lord Cawdor, in Scotland, were planted with fir and other trees, and after successive thinnings, the sale of which realized large sums, the remainder of the wood was sold off for £16,000. The sum realized for the wood on this waste land during the fifty years is stated to be equal per acre to the return from the best arable land in the country.

Periodic Headache and Neuralgia; cold hands and feet, and a general derangement of the system, including impaired digestion, with torpor of the liver, etc., are, in certain localities, invariably caused by Malaria in the system in quantity too small to produce regular chills. Many persons suffer in this way and take purgatives and other medicines to their injury, when a few doses of Shallenberger's Antidote for Malaria would cure them at once. Sold by Druggists.

A late bulletin of the American Geographical Society quotes M. Ganeval, as showing that the world is not yet overcrowded. On the contrary, allowing five acres to each inhabitant, he finds that Europe has room for an additional population of 115,000,000, Africa for 1,336,000,000, Asia for 1,402,000,000, Oceania for 515,000,000, and America for 2,009,000,000. The frozen regions of Asia and Europe are deducted from the available space. This leaves "ample room

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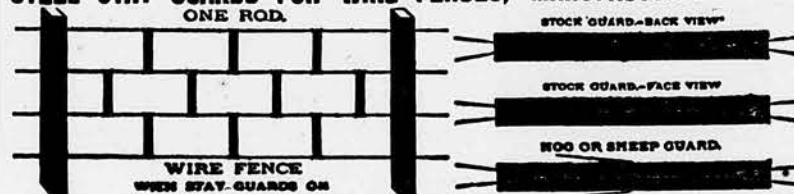
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and verge enough" for people to spread themselves over and cultivate the earth for several generations, at least.

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is the source of much sunshine and joy, brightening many a dark cloud and lightening many a heavy load—but joys continual abide only in a healthy body. The Creator with great wisdom has distributed over the earth vegetable remedies for every ill of human kind. The marvelous Laboratory reveals its secrets to man only by long and searching labor. Few men have attained greater success than Dr. R. V. Pierce; nor devised for suffering humanity a greater production than his "Golden Medical Discovery," the unfailing remedy for consumption in its earlier stages, as well as for chronic nasal catarrh, scrofula, tumors and all blood disorders.

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C. E. CROSWELL, Druggist.

Crushed. Chandler, Ill., May 22, 1888.
About six months ago I was jammed between cars; in bed 23 days; suffered four months; used three bottles St. Jacobs Oil; was able to be about in one week.
J. ASHURST.

Strained. Mt. Carmel, Ill., May 26, 1888.
Strained my back in February last; could not get round for two weeks without a cane; was cured in three days by St. Jacobs Oil. J. P. WARNER.

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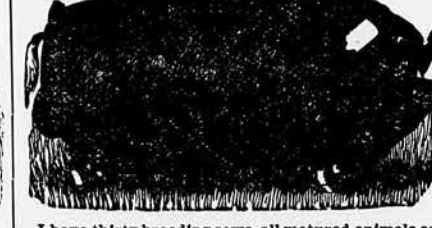
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We imported forty-one head this season; their ages run from 1 to 8 years; average weight 1,750, 1,900 to 2,300 pounds at 4 and 6 years old; mostly bays, browns and blacks. Took forty-seven prizes, mostly first Governments of Belgian Concourse and Breeding Society. Every stallion guaranteed an average foal-getter, successful breeder, and strictly purebred. The Belgian has more power and endurance, and is more easily kept and broken than other breeds, and always brings the top price. All horses recorded in the Government Stud Book. We can show more prize-winners and a better lot of horses than can be found in this State. Terms:—One-third or one-half cash; balance in one or two years. Send for illustrated catalogue. MASSION & SON, Minonk, Ill.

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THE STRAY LIST.

FOR WEEK ENDING FEB'Y 14, 1889.

Lyon county—Roland Lakin, clerk.

BULL—Taken up by Isaac McClelland, in Jackson tp., January 22, 1889, one small red bull, 1 year old, no marks or brands; valued at \$10.50.

STEER—Taken up by D. J. Lewis, in Emporia tp., January 19, 1889, one red steer, 1 year old, white face; valued at \$14.

STEER—Taken up by A. C. Baker, in Pike tp., November 1, 1889, one red steer, 2 years old, branded B inclosed in square on left hip, white in forehead and white stripe running over right eye, notch out of right ear; valued at \$22.

Chase county—J. S. Stanley, clerk.

HIFER—Taken up by Wm. Houghton, in Cedar tp., P. O. Waseva, January 20, 1889, one red and white 2-year-old heifer, branded H on left hip, hole in left ear; valued at \$15.

STEER—Taken up by C. F. Dietrich, in Toledo tp., P. O. Plumb, Lyon Co., February 4, 1889, one red and white spotted yearling steer, unknown brand on left hip; valued at \$15.

STEER—Taken up by E. L. Gewen, in Toledo tp., P. O. Saff rdville, February 4, 1889, one dark red yearling steer, no marks or brands; valued at \$15.

Sheridan county—I. H. Prince, clerk.

HORSE—Taken up by Joseph Conley, in Solomon tp., September 9, 1888, one sorrel horse, about 6 years old, branded T J on left hip, E on right side, S on left joints; valued at \$25.

Atchison county—Chas. H. Krebs, clerk.

COW—Taken up by James H. Johnson, in Walnut tp., P. O. Oak Mills, January 8, 1889, one pale red cow, about 4 years old, split in right ear; valued at \$18.

Brown county—N. E. Chapman, clerk.

MARE—Taken up by J. O. Shannon, in Powhatan tp., November 9, 1888, one light bay mare, 8 or 10 years old, no brands; valued at \$50.

Greenwood county—J. W. Kenner, clerk.

STEER—Taken up by Nis Arooe, in Bachelor tp., November 1, 1888, one roan steer, 1 year old, no marks or brands visible; valued at \$12.

HEIFER—By same, same time and place, one roan heifer, 4 years old, no marks or brands; valued at \$14.

FOR WEEK ENDING FEB'Y 21, 1889.

Cherokee county—J. C. Atkinson, clerk.

HORSE—Taken up by Levi Sweet, in Shawnee tp., January 12, 1889, one sorrel horse, about 11 years old, 16 hands high, blind in right eye; valued at \$15.

PONY—By same, one dun horse pony, 4 years old, branded with S on left hip, 13 hands high, three shoes on when taken up; valued at \$40.

HORSE—By same, one bay horse, 15 hands high, 12 years old, shod in front; valued at \$40.

Hamilton county—Thos. H. Ford, clerk.

MARE—Taken up by E. F. Hayslip, in Medway tp., January 28, 1889, one black mare, about 15 hands high, 12 years old, no marks or brands; valued at \$12.

MULE—By same, one brown horse mule, about 15 hands high, 8 years old; valued at \$40.

Nemaha county—W. E. Young, clerk.

HEIFER—Taken up by August Ronnebus, in Clear Creek tp., P. O. Clear Creek, February 1, 1889, one red heifer with white spots on flank and hip, 5 years old, both horns broken off; valued at \$14.

Gove county—D. A. Borah, clerk.

MARE—Taken up by J. S. Thompson, in Larrabee tp., December 24, 1888, one bay mare, blotch brand on left thigh; valued at \$15.

PONY—Taken up by J. L. Simmons, in Larrabee tp., P. O. Alanthus, January 11, 1889, one bay pony mare, indescribable brand on left hip and herd brand on left shoulder; valued at \$25.

Leavenworth county—J. W. Niehaus, clerk.

STEER—Taken up by Afra Bodde, in Alexandria tp., P. O. Springdale, April 3, 1888, one red steer with white spot on left side and on breast and belly, 2 years old, hole in right ear and split out; valued at \$15.

Labette county—W. J. Millikin, clerk.

PONY—Taken up by James H. Jarvis, in Richland tp., November 5, 1888, one bay pony mare, 12 hands high, K on left thigh and a three-pronged brand on right shoulder; 4 years old; valued at \$20.

FOR WEEK ENDING FEB'Y 28, 1889.

Douglas county—M. D. Greenlee, clerk.

3 HOGS—Taken up by Chas. Longenecker, in Marion tp., (P. O. Globe, care Silas Cavin, J. P.) February 2, 1889, three dark female hogs, weight 130 pounds each, no marks; valued at \$15.75.

Wabunsee county—C. O. Kinne, clerk.

MULE—Taken up by C. L. Davis, in Wabunsee tp., P. O. Pavilion, February 6, 1889, one brown mare mule, 3 years old, no marks or brands visible.

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3,139 Presents.	Amounting to \$10,000

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The Jar will be opened and grains of Rice counted April 25th, 1889, by a Committee chosen by the Subscribers, AND RESULT ANNOUNCED IN MAY NUMBER OF THE AMERICAN HOMESTEAD.

Should no one guess the correct number, then the one guessing nearest will receive the first present of \$2,000. Should two or more persons guess the correct number, then the one whose guess is first received will receive the \$2,000, and the next the \$1,000, and so on.

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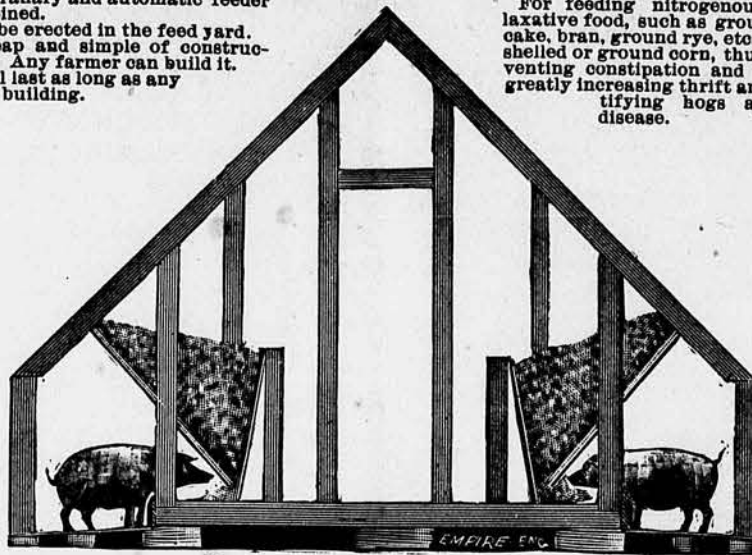
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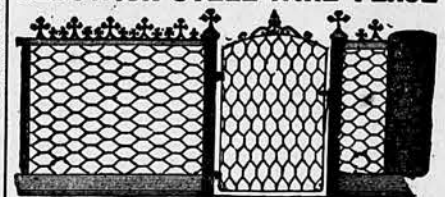
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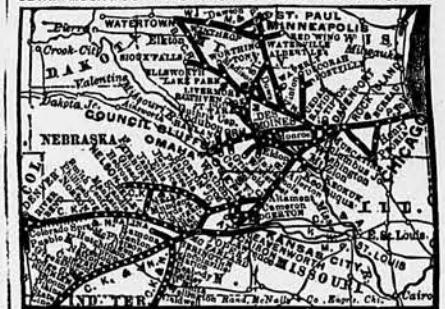


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CHICAGO.

TWO-CENT COLUMN.

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

Special.—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates—cash with the order. It will pay you! Try it!

GLENWOOD HOTEL.—For sale on easy terms, or will trade for live stock. Address Jno. T. Voss, Girard, Kas.

LOCUST TREE SEED.—Plant Seed Company, St. Louis, Mo.

2,000,000 HEDGE PLANTS.—125,000 two and three-year-old apples, 500,000 Russian mulberries, catalpas, etc. A full line of nursery stock. Babcock & Stone, North Topeka.

FOR SALE.—Jersey Bull calves from three-fourths to thirty-one thirty-seconds Jersey blood. M. Madison, P. O. Box 79, Topeka, Kas.

WANTED.—Cane seed. Write quick, quantity, variety, price, with sample. M. J. Tallent, Minneapolis, Kas.

FOR SALE.—160 acres of very rich level prairie land, very cheap. Address Lincoln Newsom, Scott City, Kas.

ESPERETTE CLOVER.—Plant Seed Company, St. Louis, Mo.

5,000 BUSHELS TEXAS RED OATS.—For sale in one to fifty-bushel lots. H. C. Hodges, Danville, Kas.

FOR SALE.—A few good Light Brahma cockerels. No better stock. Eighteen years a breeder. Wm. Hammond, Box 542, Emporia, Kas.

FOR EXCHANGE.—200-acre farm in Bourbon Co., Kas., for stock of some kind. Also 40-acre farm in Illinois, near St. Louis, for Kansas land and some money. Have also a registered Hereford bull to sell or trade. Chas. P. Damon, 941 N. 2d St., St. Louis, Mo.

FOR SALE OR TRADE.—A well-established hard-ware business for good cattle, mares or hogs and part cash. Gust Carlander, Pratt, Kas.

BOLTON'S BURN SALVE.—Leads the world in quickly curing burns, chafes, galls, chapped hands, saltburns, eczema, and all skin eruptions, bruises and sores, on man and beast. It is the unfailing antidote for scratches on horses. It is the unfailing cure for home and farm needs. All who use it speak its praise. Promptly and securely mailed, postpaid, to any postoffice in the United States and Territories on receipt of 40 cents per pot; three pots for \$1. Address J. B. Bolton, Glen Gardner, New Jersey.

TREE SEEDS.—All kinds. Plant Seed Company, St. Louis, Mo.

FOR SALE.—Roseberry, just coming 2-year-old Stallion, 15 hands high, dark bay; sire Roseberry (Imported Cleveland Bay), dam Whis by Jim Vincent (Standard), Whis' dam Dora by old Eclipse. Also Buff Cochon fowls, \$3 per trio; eggs, \$1 per thirteen. H. A. Thomas, Scranton, Kas.

STRAYED OR STOLEN.—A small cream-colored mare, about 9 years old, a little away-acked. Any information leading to her recovery will be suitably rewarded. Address Chas. A. Mellor, Topeka, Kas.

FOR SALE.—Mammoth Bronze turkeys and Scotch Collie pups. Wm. Booth, Jr., Winchester, Kas.

FOR SALE.—Fifteen choice Poland-China sows, two fine spring boars, a few nice fall pigs. Prices reasonable. J. D. Ziller, Hiawatha, Kas.

SEED CORN.—Ninety-day Dent, from Northern seed. Will not sucker. \$1 per bushel; two or more 50 cents. Texas oats, 30 cents; Welcome oats, 50 cents. Sacks free. A. E. Jones, Topeka, Kas.

HOLSTEIN CATTLE.—For sale for six weeks. Five imported cows. The finest 3-year-old bull in the State; two heifers, two bulls, yearlings; one bull calf, and high-grades. E. P. Bruce, Emporia, Kas.

WANTED.—Salesmen to sell nursery stock. Good wages, steady work. Enclose stamp for terms. B. F. Brower, Eaton, Ohio.

FLOWER SEEDS BY MAIL.—Plant Seed Company, St. Louis, Mo.

SEED CORN.—Pure Golden Beauty, at \$1 per bushel. Sacks free. Address Chas. McCoy, Thompsonville, Jefferson Co., Kas.

EARLY SEED CORN FOR SALE.—Grown near Coffeyville, Kas. If planted early it matures in August. Sacked and delivered at depot for \$1.50 per bushel. Sample at KANSAS FARMER office. William Bearinger, Coffeyville, Kas.

WANTED.—A Jersey yearling bull. State price, color and blood. M. Madison, Box 79, Topeka, Kas.

LAND WANTED.—In exchange for stallions or geldings. Address R. I. Blackledge, Salina, Kas.

WANTED.—Situation in cheese and butter factory, by experienced man. Address F. B., KANSAS FARMER, Topeka, Kas.

WANTED.—To sell, to a good, practical cheese-maker, one-half or the whole of a cheese factory, with all modern improvements. If can't sell will rent. The factory is in a good dairy district in Nemaha Co., Kas. Correspondence solicited. Jno. S. Hadden, Centralia, Kas.

GARDEN SEEDS BY MAIL.—Plant Seed Company, St. Louis, Mo.

FOR SALE, ORCHARD HILL FRUIT FARM.—Ninety-one acres, located one mile west of State University. Has apple, pear, cherry and all varieties small fruits, cold storage and other building. Address N. P. Deming, Lawrence, Kas.

SWEET POTATOES SENT OUT on shares. No experience required. Directions for sprouting FREE. Address T. J. SKINNER, Columbus, Kas.

640 ACRE RANCH.—Located in Wright Co., Missouri, within three miles of the prosperous railroad town of Mountain Grove. All covered with good growth of black oak and blackjack timber. Enough timber to fence it four times. No underbrush. Between 400 and 500 acres can be cultivated. All will grow clover and grasses. Water furnished by springs. In the premium fruit belt. Will make a fine stock farm for some one. Will be sold at a bargain. Correspondence only from those who mean business. Geo. M. Sawyer, Springfield, Missouri.

TWO-CENT COLUMN—(Continued.)

FOR SALE.—Twenty-five Thoroughbred Hereford Bulls. Extra fine individuals of the Fortune, Wilton and Grove families. Also cows and heifers. This herd is one of the oldest and largest in the country. Address W. G. Hawes, Mount Pleasant Stock Farm, Colony, Kas.

WANTED.—To rent a farm with 40 or 80 acres of plow land. Have the cash. C. Dourney, Eldridge, Iowa.

CANE SEED FOR SALE.—Inquire of G. J. Maelser, Neuchatel, Nemaha Co., Kas.

FOR SALE.—Holstein registered cattle. Imported milk cows, coming fresh; also young stock of all ages. By reason of the death of my husband I am compelled to sell. Correspondence solicited. Mrs. A. A. Young, Greenleaf, Kas.

WANTED.—To trade, sell or rent, a furnished hotel in Manhattan, Kas. Will exchange for stock. Address John T. Voss, Girard, Kas.

FOR SALE CHEAP.—Two well-bred Poland-China boars, old enough for service. Also younger stock. All gilt-edged pedigrees. Address Scott Fisher, Holden, Mo.

SHEPHERD PUPPIES.—For sale. \$5 each; \$8 per pair. Geo. B. Bell, Neely, Kas.

NINETY-DAY CORN.—Four years a success in Kansas. Fifty bushels to the acre in 1888. The corn for a sure crop. Seed for sale. Joshua Browning, North Topeka, Kas.

FOR SALE.—Mammoth clover seed. Strictly choice. Crop of 1888. \$5.50 per bushel, f. o. b., sacked. Edwin Snyder, Oskaloosa, Kas.

PURE GERMAN CARP.—And all the different fancy varieties of gold fish, and pond lilies and mosses for aquariums, at low prices. Wm. Shoup, Blue Ridge, Shelby Co., Ind.

IMPROVED AND UNIMPROVED FARMS.—From 140 to 1,000 acres, in the great Solomon valley, in Osborne county, to exchange for land in Eastern Kansas. Cochran & Farwell, Osborne, Kas.

15 LIGHT BRAHMA COCKERELS.—Felix pedigree, grey, sired by Victor 5585, score 924 points by Felix. Fine ones, \$5.00; trios, \$10.00. Mammoth Bronze Turkey toms—fine, and Pekin ducks, a few pairs. Pedigree furnished with every sale. Emma Brosius, Topeka, Kas.

FRUIT AND FOREST TREES.—Small fruits and flowering shrubs and plants, at the Arlington Nursery. Send for price list. B. P. Hanan, Arlington, Reso Co., Kas.

EASTERN FARMERS.—Want to buy or exchange for Kansas land. We have facilities for reaching such buyers. If you have anything to sell or exchange, write us. Rumsey Bros., Emporia, Kas.

SHORT-HORNS AND JERSEYS.—Males and females, of any age, for sale by John T. Voss, Girard, Kas.

NORMAN STALLION FOR SALE.—John T. Voss, Girard, Kas.

PURE EARLY OHIO SEED POTATOES.—From selected Northern seed. Also Mammoth Cuban. Riley's Favorite and Early California ninety-day seed corn, grown and for sale by A. Tomlinson, Box 896, North Topeka, Kas.

FOR SALE.—Pure Langshan fowls of fine quality, at 75 cents each. J. T. Williams, Mulvane, Kas.

POULTRYMEN!—The *Poultry Review*, Box K, Chatham, N. Y., a 16-page poultry journal, 25 cents a year. Three sample numbers 10 cents.

WATER MILL PROPERTY.—To trade for farm in eastern Kansas. Mill in good repair. Address B. N. Turk, Holon, Kas.

PLANT SEED CO., St. Louis, Mo.—Established 1845. Alfred Plant, President; Fred S. Plant, Secretary. Send for catalogue.

I HAVE FOR SALE.—A large stock of Apple Trees, Wild Goose Plum, Grape, Asparagus, Rhubarb, Onion Sets, cheap. Address J. W. Hanson, Ft. Scott, Kas.

IRVIN BLANCHARD, DEALER OF CATTLE.—Two years experience. Use Haaf's chute. Homestead, Chase Co., Kas.

WANTED.—Horses and colts for choice Topeka property. Also two eighty acres near Topeka for horses. Incubance small. Address A. H. R., 725 Kansas Ave., Topeka, in care of M. J. Marshall.

KANSAS ECONOMY INCUBATORS FOR SALE.—Also 25-cent Book, which tells how to make and operate incubators and manage poultry or chicks hatched from incubators. Jacob Yost, Topeka, Kas.

FIELD SEEDS. T. LEE ADAMS, Landreth's Garden Seeds, 419 Walnut street, Kansas City, Mo.

A GOOD FARM TO RENT FOR CASH.—About fifty or sixty acres in cultivation; the best of land; about six acres of No. 1 grass land and plenty of water. Hay and mowed oats to sell. Call and see me, five miles north of Richland, Clinton road, or address G. Griswold, Topeka, Kas. P. S.—Or will sell the outfit, 175 acres.

WANTED.—To negotiate with parties interested in starting a cheese factory or separator creamery. Have some means and fourteen years experience as butter and cheese-maker. Address J. L. Ables, 1023 New Jersey St., Lawrence, Kas.

ECLIPSE SEED HOUSE.—Topeka, Kansas, Western headquarters for Landreth's seeds. C. E. Hubbard.

SHORT-HORN BULLS FOR SALE.—I have an extra fine lot of young Bates and Bates-topped Short-horn bulls for sale. They are short-legged, thick-fleshed beefy animals, just the kind to improve your herd. Long time given to purchasers. G. W. Glick, Atchison, Kas.

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

Red Cedars, Transplanted, 12 to 16 in., per 100 \$5.00
" " " " 16 to 20 " " 100, 6.25
" " " " 20 to 24 " " 100, 7.50
" " " " 24 to 28 " " 100, 8.75
" " " " 28 to 32 " " 100, 9.90

My trees are nursery-grown from Northern seed, stocky and well-rooted. I feel confident they will give entire satisfaction. They are easy to make grow, and are far superior to wild transplanted trees from southern Illinois and Missouri. I solicit the patronage of Kansas planters. Full instructions for planting upon application. Fifty trees at 100 rates. Box 100. G. W. TINSCHER, Topeka, Kas.

TO EXCHANGE FOR STOCK.—160 acres three and three-quarters miles from St. Francis, Kas. Address Box 122, St. Francis, Kas.

SEEDS

J. C. PEPPARD, 1220 UNION AVENUE,
(One block from Union Depot)
KANSAS CITY, MO.
MILLET A SPECIALTY.
Red, White, Alfalfa & Alsike Clovers,
Timothy, Blue Grass, Orchard Grass, Red Top,
Onion Sets, Tree Seeds, Cane Seed, Etc.

TWO-CENT COLUMN—(Continued.)

MAMMOTH BRONZE TURKEYS.—For sale cheap. E. E. Warren, Eudora, Douglas Co., Kas.

WANTED.—Every Mer- **PURE GARDEN SEEDS** chant to sell our Send for price list. Trumbull, Reynolds & Allen, Kansas City, Mo.

WANTED.—Farmers and Gardeners to use our **PURE GARDEN AND GRASS SEEDS.** If your merchant don't have them, write us direct. Trumbull, Reynolds & Allen, Kansas City, Mo.

FOR RENT.—A new three room house, with clo- ters, spring, etc., at Rochester, one and a half miles north of North Topeka. Will rent on long lease with land attached, or house till March 1, next. Also after March 1, 1889, a dairy farm conveniently fixed up. James U. Hughes, North Topeka, Kas.

PURE TREE SEEDS for TREE CLAIMS Send for catalogue and price list. Trumbull, Reynolds & Allen, Kansas City, Mo.

FOR SALE OR TRADE.—One full-blood Norman Stallion. Also two Clydesdale Stallions. I will sell on time to suit the purchaser and at low figures. Address at once, Robert Ritchie, Peabody, Marion Co., Kas.

FOR SALE AT A BARGAIN.—The best improved 320-acre farm in Rawlins county, Kansas, together with stock, crops and machinery, on account of health of owner. Address H. J. Browne, Atwood, Kas.

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

Am always in the market to buy or sell **SEEDS** J. C. PEPPARD, 1220 Union Ave., Kansas City, Mo.

HORSES FOR SALE.—One carload roadster fillies, 2 and 3 years old, sired by a Clay stallion, and one carload draft fillies, rising 2 and 3 years old, sired by Clyde and Percherons. Also young roadster and draft stallion, two recorded Percheron and Clydes- dale stallions and grades. Address H. P. Clay, Pres- cott, Linn Co., Kas., or Ed. T. Shaffer, Fulton, Kas.

1,000,000 CRESCENT STRAWBERRY PLANTS.—1,000, \$2.00; 5,000, \$1.75 per 1,000; 10,000, \$1.50 per 1,000; 20,000, \$1.25 per 1,000. E. J. Holman, Leavenworth, Kas.

WANTED.—To negotiate with parties interested in starting a cheese factory or separator cream- ery. Have some means and fourteen years experience as butter and cheese-maker. Address J. L. Ables, 1023 New Jersey St., Lawrence, Kas.

JACK FOR SALE.—Black Dan, Kentucky-bred, 8 years old, is a sure foal-getter. Also mares and horses for sale. Address Hays & Marple, Box 720, North Topeka, Kas.

PLYMOUTH ROCKS FOR SALE.—Yards estab- lished 1879. Thos. H. Mason, Belle Plaine, Kas.

FOR SALE OR EXCHANGE.—The Imported Nor- man stallion Vixenon. Having a large number of his get to breed the coming season, I desire to ex- change for an imported Norman stallion of equal indi- vidual merit and breeding qualities. Or will sell and give terms to suit, on good bankable paper. Here is a rare opportunity to form a horse company. Also two superior "herd book" Hereford bulls for sale. Dan Small, care American Bank, North Topeka, Kas.

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

TREE SEEDS J. C. PEPPARD, 1220 Union Ave., KANSAS CITY, MO.

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

ECLIPSE SEED HOUSE.—Special rates to market gardeners. Send list for prices. C. E. Hubbard, Topeka, Kas.

GENTLEMEN AND LADIES.—Send 10 cents for our book showing how you can make money easily. No peddling or canvassing. It will not interfere with your present occupation. CHAS. E. BETTS & CO., Box 191, Worcester, Mass.

SPECIAL ANNUAL SALE!

200 CLEVELAND BAY AND SHIRE STALLIONS & MARES

To make room for a large consignment of Stallions to be shipped in May, we will close out our stock on hand at reduced prices and on liberal terms. Don't lose this opportunity to secure one of our fully acclimated, vigorous young Stallions at low figures. Remember that our stallions are nearly all imported as yearlings and grown up and matured on our own farms, which makes them much surer breeders.

We will also sell
100 CHOICE HOLSTEINS,
at very low prices, considering quality of stock. Send for our new illustrated Pamphlet.
GEO. E. BROWN & CO., AURORA, KANE CO., ILLINOIS.

HOLSTEIN-FRIESIAN CATTLE FOR SALE!

Having disposed of our Woodland Dairy Farms, we now offer our
Entire Herd of Holsteins

for sale, without reserve, embracing the blood of the Aggie, Netherland, Artis, Billy Boelyn, Rip- Van-Winkle and Echo families, and being the richest milk and butter breed, as well as the largest herd in the West, bargains can be had in young Bulls, Heifers and Cows on liberal terms and at closing-out prices. 19 Bulls, 22 Heifers and 33 Cows to select from. You cannot afford to buy without first writing or seeing us.
Barns in City.

HENSON & RATHBONE, COUNCIL GROVE, KANSAS.

BLAKE'S TABLES
—OF—
WEATHER PREDICTIONS
FOR 1889.

According to Mathematical Calculations, based on Astronomical Laws, is ready for mailing.
Price 75 cents per copy, or two copies for \$1.00.

These tables give the maximum, minimum and mean temperature, in degrees Fahrenheit, for each month in the year, for most of the Northern States and part of the Southern States, each State being calculated separately. The amount of rainfall has been calculated for each State, most of the Territories, and for Quebec, Ontario and Manitoba, for each month in the year, and the results stated in inches; and most of the large States have been subdivided into from two to six parts. General predictions are also given for Eng- land and Europe. The predicted degrees of temperature and inches of rainfall will prove to be so nearly correct that they will clearly indicate which parts of the country will be the warmest and which the coldest, which the wettest and which the driest for each month. We have compiled all the records for the past fifty years, and show in inches what the average rainfall has been in each of said subdivis- ions. Also what the normal temperature has been. We have also calculated the weather for all civilized countries, to know what the crops will be in all parts of the world, from which we have inserted a table showing what the probable price will be in Chicago for wheat, corn, oats and cotton for each month in 1889.

The best evidence of the correctness of these predictions is our past record, which shows a verification of 88 per cent. for the past four- teen years; and the constantly increasing demand from all parts of the civilized world for our weather predictions. The floods, drouths and temperatures for 1889 will be at greater extremes than anything which has occurred since 1816.

Address C. C. BLAKE, Topeka, Kansas.

Send \$1.50 to the KANSAS FARMER and get the paper one year and Blake's Weather Predictions.

MISSOURI TROTTER AND PACING HORSE
BREEDERS'

Second Annual Sale!

AT
INDEPENDENCE, MO., MARCH 7, 1889.

Standard-bred Stallions, Mares bred to the best sires in the State, unexcelled Drivers and Saddlers, Saddle and Farm Stallions. Fast Track Animals—Honesty, 2:17½; Fannie Clincker 2:3¼; Jay Wilkes by Count Wilkes; Harold Patch-n by Harold, sire of Waud S., 2:08½. No matter what you want you will find it here. Fifty head to select from. For catalogues address L. P. MUIR, Manager, At Independence, Mo. Or L. E. CLEMENT, Pierce City, Secretary of Association.

Note—The sale of Trotting Stock of Schoonmaker and Brown Bros., at Fat Stock Show Grounds, Kansas City, Mo., March 6, 1889. For catalogues, address as above, Room 107 Baird Building, Kansas City, Mo. You can attend both sales.

FOR SALE, the FINEST and BEST BRED
HOLSTEIN-FRIESIAN

Imported and Home Cattle, without reserve. First come, first served. Also large number of young stock and grades. T. G. HINDS, Kingman, Kansas.