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KANSAS FARMER

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DRY FARMING OR IRRIGATION.

A good many of the people in Kansas who a decade ago believed that a large portion of the State would be dependent upon irrigation to make farming possible have changed their views on account of the favorable outcome from various improvements in the methods of "dry farming." While these improvements constitute important advances which will be permanently beneficial to tillers of the soil in both semi-arid and in more humid regions, there is no question of the utility of irrigation in all phases of intensive farming.

Much surprise has been expressed at the slow and halting progress of irrigation in regions where droughts render crops uncertain and where it is almost certain that the average production per acre would be at least doubled by the application of water at a cost, which, while varying greatly, comes well within the value of the increase in the crop. Doubtless, the low price of land has been an important factor in retarding irrigation. The farmer in the wheat belt could buy land a few years ago at $10 an acre. He planted his wheat expecting it would yield at least twenty bushels per acre and knowing that records of above forty bushels had been made in well authenticated cases. Possibly he shut his eyes to the fact that an average of thirteen bushels would make the plains region happy, and, indulging his propensity to gamble on the possibilities, drove afield with four horses and appropriate machinery, hiring a little help for a few days, and "put in" some hundreds of acres of wheat. At harvest a gang of hands would be imported, and if the season smiled he would come out of the year's operations with a snug fortune. The philosopher who would suggest to this plains farmer that, with abundance of water only a few feet below the surface, he should confine his operations to a smaller area and by irrigating his crops double their average yield and who should take pencil and paper to prove that the wheat-farmer is wasting his opportunities would probably meet some surprises as follows:

Philosopher. How many acres are you farming in this uncertain way?

Plains Farmer. Two hundred and forty.

Philosopher. The intensive farmer who irrigates his land does better on forty acres.

Plains Farmer. How much wheat can a man average by intensive farming and irrigation?

Philosopher. Col. C. D. Perry, of Englewood, Kan., irrigated wheat for a number of years and averaged 33 1-3 bushels per acre.

Plains Farmer. You say a man can farm forty acres that way?

Philosopher. By having some of his land in alfalfa, some in orchard, by divisifying his crops he can farm and irrigate forty acres with the help of a man through the busy seasons. But look at the increase in the yield of wheat—at least two and a half times as much per acre.

Plains Farmer. Well then, let us figure it on a basis of wheat, allowing that the other crops will be as profitable as the wheat. Forty acres of wheat at 33 1-3 bushels will yield 1333 bushels. I raise 240 acres of wheat which may go 40 bushels to the acre and may make only 5 bushels. You say it averages 13 bushels. That gives 3120 bushels against 1333 for the intensive farmer.

Philosopher. But look at the investment in your land.

Plains Farmer. Stranger, I got that land for a song and sung it myself; besides I have plenty more land that has never seen a plow. I took a claim in the early days and went to raising wheat. When I got a big crop I just salted the surplus down in more land. That land is doubling up in value so that it is a good investment whether I work it or not. I may hire a little extra help and put another half-section in wheat next season. But I don't feel much inclined towards your 40-acre proposition while I have more land than I can farm the easy way.

Doubtless the plains farmer is right for the present, while just as surely the irrigated and intensive farming prophets are right for the approaching future. Among these prophets stands prominently former Senator J. M. Carey, of Wyoming, author of the Carey act, who, in a letter to Chairman Gwinn of the executive committee of the irrigation congress, has the following to say concerning the work of the next irrigation congress:

"The National Irrigation Congress, during the years of its existence, has accomplished wonders. It has called together, from year to year, those most learned in the science of irrigation and practical irrigators, also men willing and anxious to learn. Among those who have come were men prominent in all branches of business and professional life, as well as those conspicuous in public life.

"These congresses have educated the people on a subject about which but little was known 10 years ago, outside of the States and Territories included in the arid regions of the United States. One who has been alive to the subject has marked the rapid change in public sentiment with reference to this great question.

"That the next quarter of a century will, through irrigation works, public and private, change the entire country west of the hundredth meridian and make places and homes for millions of people is a fact now conceded by all familiar with the subject. The results, I believe, will be equal to the doubling of the strength of the nation.

"I am safe in saying that the irrigation works now being constructed will cost fully a hundred million of dollars, while the projects being contemplated and being investigated for early initiation will cost hundreds of millions of dollars.

"The irrigation congress has done its full share of the good work, yet it has only commenced. Let those who shall constitute the congresses always have in view the one question, 'How can they best promote and forward the reclamation of the arid regions of the United States?'"

CONCRETE BARN.

EDITOR KANSAS FARMER:—I am thinking of building a barn 32x36 and wish to know the feasibility of making the outside wall of a concrete, made by mixing cement with sand and gravel or limestone broken fine. Which would be best the gravel or rock? If gravel is used, what should be the proportion? If rock is used, how small should it be broken? They are both convenient, but the gravel has some soil mixed with it.

I am a reader of your valuable paper and think it is worth many dollars every year, so I renew my subscription and send a new one.

Cowley County. G. H. RHODES.

It is entirely practicable to construct the barn walls of concrete. By reinforcing with steel rods, the liability to crack is almost eliminated. The concrete may be made of either cement, sand, and gravel or cement, sand, and broken stone. The sand and gravel or broken stone should be clean. If not clean, they should be washed. Any considerable quantity of soil or dust weakens the concrete. Clean, coarse gravel is unexcelled as a filler. If broken stone is used, none should be larger than will pass readily through a two-inch hole.

Safe proportions for this work will be 1 part Portland Cement, 3 parts clean sand, and 6 parts clean, broken stone or clean gravel.

In mixing it is better to have the sand fairly dry. Spread three measures of sand over the bottom of the mixing box or platform; scatter one measure of cement over the sand; mix these two ingredients by shoveling over or by working with hoes until thoroughly and evenly incorporated together. When thus thoroughly mixed, the entire mass has almost the color and apparently the texture of pure cement. Next wet the mixture and work over until the water is thoroughly incorporated, making a mortar. Then add 6 measures of wet broken stone or wet gravel and work with shovels or hoes until the mortar is evenly incorporated with the broken stone or gravel. Thoroughness of mixing is essential to making a good job.

The mixture must not be prepared until all preparations for using have been perfected.

The height of the proposed barn is not stated. We shall assume that it will be 20 feet from floor to eaves, in which case the walls may be 10 inches thick.

For the foundation dig trenches 18 inches wide and deep enough to have a firm footing. The depth will depend much upon the kind of soil. No cribbing will be needed while filling the foundation trenches.

The amount of cribbing needed for the walls above ground will depend much upon how rapidly the work is to be done. Assuming that plenty of help will be available and the work will be pushed, the following plan may be adopted:

Have all door and window-frames ready. As soon as the foundation walls have reached the proper level, place the door-frames in position, and brace so that they will not be easily moved. Bore half-inch holes in the jambs one foot apart and make depressions in the face side large enough to accommodate nuts for half-inch bolts.

For cribbing use 12-inch boards grooved on one side as for shed-roofing. Give these boards a good soaking in a trough of crude-oil. After the oil has dried sufficiently to be handled, nail two of these boards to 2 by 4 cleats 2 feet apart, placing the grooved side of the boards to the cleats. Bore half-inch holes through the ends of the cleats and through the boards. Make enough of these cribbing pieces to go once around the outside and once around the inside of the wall. Provide ½ by 18 inch bolts enough to bolt the outside and the inside cribbing together at both top and bottom of each cleat. Since the walls will be 10 inches thick, it will be necessary to provide extra cleats for the outside cribbing at about 1 foot from the corners.

Place the cribbing on the foundation, placing the outside sections in line and plumb. Place the inside sections 10 inches from the outside. It is well to have pieces of board 10 inches long to place between the inside and outside sections at both bottom and top to make sure of uniformity. These should be taken out as the work progresses. The bolts should be passed through and the nuts should be put on and the cribbing should be drawn to the proper distance apart.

For reinforcement of walls use ½-inch steel rods of such lengths as may be had from dealers. About two inches at the ends should be bent at right angles on each rod. In placing the rods in the walls they should break joints except at doors, windows, and corners. On the rods which terminate at doors and windows cut threads and provide ½-inch nuts for them.

At about 1 foot above the surface of the ground, place reinforcing rods horizontally in the walls. As the walls progress, place such reinforcing rods so that each course of rods will be one foot above the next below. At doors and windows let the rods extend into the holes in the frames and screw on the nuts. Before filling in the concrete, it will be well to brace the jambs so that they can not be forced towards each other. The pressure exerted by concrete in building is astonishing to all who have had no experience with it.

Presuming that all is in readiness and a batch of concrete has been mixed, it should be shoveled into the mould and well tamped so as to compact the materials well together. The materials should contain water enough to show wet under the tamper, but not so wet that water will run through the cracks between the boards of the cribbing. Special care should be used to have all spaces well filled next to the boards.

After a mould has been filled, it should be allowed to stand two or three days before removing the cribbing.

When the cribbing is to be removed, unscrew nuts, drive out the bolts from a section of the cribbing, and raise it so that when the lower bolts are replaced they will rest on top of the hardened concrete. (The small holes left by the bolts are easily filled.) On resetting the cribbing, it should be carefully lined up and plumbed.

It is not desired to rush the work, cribbing for only a half or a fourth of the perimeter may be used. There need be little waste of cribbing lumber, however, for the boards may be used in the roof after they have served their purpose in the construction of the walls.

Recesses in the walls for the support of beams may be made by placing suitable blocks where the recesses are desired. Bolt holes where needed are also easily made during construction.

Very cautious builders might place a couple of extra reinforcing steel rods about two inches above each door and window, making them long enough to extend a foot or two beyond the openings.

Such a barn ought to have a concrete floor. It may have also concrete feeding and watering troughs as well as concrete gutters behind the cows. The floor will usually be made a little higher than the surface of the ground. It may be made level with or a little lower than the surface if concrete thresholds are made high enough to prevent flooding from the outside. The level of the floor will depend somewhat upon the facilities for drainage. Where a concrete floor can be placed low, the saving in the height of walls may entirely compensate for the added cost of concrete over wooden floors. Professor King estimates that the materials for a concrete floor cost less than those for a wooden floor, including joists and supports.

The time has probably not yet ar-

rived for consideration of reinforced concrete roofs for barns. Such roofs are made. The department of archives of the Kansas Grand Lodge of Free Masons, at Topeka, has such a concrete roof covered with asphaltum. The building is entirely fire-proof. The Terminal Storage Warehouse, at Kansas City, is constfucted of reinforced concrete throughout, including foundations, walls, floors, partitions, columns, roof, and water-tank on top of building. Even the inside doors are of concrete.

Such a building should last for many generations. The fire risk is practically eliminated; decay comes not; the tooth of time is almost powerless for harm, so that repairs are reduced to the minimum.

FORMULAS FOR MAKING PORTLAND CEMENT CONCRETE.

EDITOR KANSAS FARMER:—Have you a book to sell that gives formulas for making different useful articles, with concrete and hydraulic cement? If not, can you give me the address of parties that have such a book?

THOS. W. HAYS.

Lincoln County.

There are several publications dealing with cement questions. One of the latest and most convenient can be had for the asking. It is entitled "Concrete Construction About the Home and on the Farm." A postal card request addressed to The Atlas Portland Cement Co., 30 Broad St., New York City, will bring a copy of this useful book to any reader of THE KANSAS FARMER.

As samples of what may be found in this book, published for free distribution for the purpose of advertising the Atlas brand of Portland cement, the following taken from a larger work entitled "Concrete, Plain and Reinforced" will be found interesting and valuable:

"As a rough guide to the selection of materials for various classes of of work, we may take four proportions, which differ from each other simply in the relative quantity of cement:

A RICH MIXTURE.

"For reinforced engine or machine foundations subject to vibrations; for reinforced floors, beams, and columns for heavy loading; tanks and other water-tight work—proportions 1:2:4, that is, one barrel (4 bags) packed Portland Gement (as it comes from the manufacturer) to 2 barrels (7.6 cubic feet) loose sand, to 4 barrels (15.2 cubic feet) loose gravel or broken stone.

A MEDIUM MIXTURE.

"For ordinary machine foundations, thin foundation walls, building walls, arches, ordinary floors, sidewalks, and sewers,—proportions 1:2½:5, that is, 1 barrel (4 bags), packed Portland Cement, to 2½ barrels (9.5 cubic feet) loose sand, to 5 barrels (19 cubic feet) loose gravel or broken stone.

AN ORDINARY MIXTURE.

"For heavy walls, retaining walls, piers, and abutments, which are to be subjected to considerable strain,—proportions are 1:3:6, that is, 1 barrel (4 bags), packed Portland Cement, to 3 barrels (11.4 cubic feet) loose sand, to 6 barrels (22.8 cubic feet) loose gravel or broken stone.

A LEAN MIXTURE.

"For unimportant work in masses where the concrete is subjected to plain compressive strain, as in large foundations supporting a stationary load, or backing for stone masonry,—proportions are 1:4:8; that is, 1 barrel (4 bags) packed Portland Cement, to 4 barrels (15..2 cubic feet) loose sand, to 8 barrels (30.4 cubic feet) loose gravel or broken stone.

"The above specifications are based upon fair average practice. If the aggregate is carefully graded and the proportions are scientifically fixed, smaller proportions of cement may be used for each class of work."

Undoubtedly the use of cement concrete is destined to become much more common. In all cases, thorough mixing of the ingredients is essential to good results. Another important precaution is to promptly place the concrete where it is to harden. If allowed to set before so placed, the strength is greatly impaired.

A SNAP FOR FARMER BOYS.

Beginning on December 27 and lasting until January 5 next, there will be held at the Kansas State Agricultural College, at Manhattan, a series of the most important meetings ever held in the State. It may be called a nine-days' institute. This institute will include, in its various sessions, the boys' corn contest, stock and stock-judging, corn and corn-judging, and then the annual meetings of the Kansas Corn-Breeders' Association, the Kansas State Dairy Association, the Kansas Good Roads' Association, the Kansas Poland-China Breeders' Association, the Kansas Berkshire Breeders' Association, the Draft-horse breeders, and the Aberdeen-Angus breeders.

What a treat this will be! A visit to the beautiful agricultural college, which is the wonderland of Kansas, with nine whole days in which to see the sights and attend all these meetings; what would you not give for this privilege? It is worth working for, is it not?

Now, THE KANSAS FARMER is very much interested in these meetings and it is also very much interested in you. It proposes to give you a chance to attend these meetings, visit the college, and have the time of your life without costing you a cent. It is this way:

Any farmers' son in Kansas, who will get up a club of new subscribers for THE KANSAS FARMER at the introductory rate of 50 cents for each new subscriber to the aggregate amount of $20, before December 21, 1906, will be given a free trip to Manhattan and return to his home, and have his board bill paid in Manhattan during the nine days of the institute.

SUMNER COUNTY, KANSAS.

It were well for those easterners, of whom are many, who think that Kansas is still the land of the drouth, the grasshopper, and the hot wind, if they could see Sumner County. It would be a revelation to them. With a wheat-crop that was miles in extent and that averaged close to 30 bushels per acre; corn reaching to the eaves of the smaller farmhouses and bearing one to three ears to the stalk; alfalfa producing five tons to the acre of the finest and richest hay that grows on earth, and oceans of prairie grass; a sight of this county now would bring relief to the eyes of the tired toiler from beyond the Missouri. Sumner County already has a record as the greatest wheat-producing county on earth, but that was in her younger days, when her soil was raw and untamed and her people did not know how to farm there. Now she is older and with age has come that experience which makes the business of farming sure and profitable; which adapts varieties to soil and climatic conditions; which has proved the value of a rotation of crops and the absolute necessity of returning the soil fertility removed by former crops. With it, too, has come the knowledge that pure-bred livestock is vastly more profitable than the scrub; that the lavish abundance of cheap feeds grown here will produce as good Shorthorns, Poland-Chinas, and Percherons as anywhere on earth and vastly cheaper than is possible back east; that the range steer, the "rail-splitter," and the broncho have disappeared as the chief productions in live stock, and that her land is now farmed by the acre and not by the mile. Sumner County is in Kansas.

The KANSAS FARMER prints this week a communication from President Ripley, of the Atchison, Topeka & Santa Fe Railway Company, to the people of Kansas, in which he asks consideration of several points presented. This paper is not in politics nor does it seek to influence the political action of any of its readers. The editor advises all farmers to examine all sides of public questions among which the railroad question is just now prominent. We like the frankness of President Ripley in stating clearly what he has to say and in signing his name to his statement. The man of whom all editors is weary is the one who wants a lot of controversial statements published, but is particular to specify that his name must not appear. Read what President Ripley has to say, and, if further information or verification of his statements be desired, act on his invitation to address him in good faith.

In sending his renewal subscription for THE KANSAS FARMER, an old friend, of Sedgwick County, writes: "I have given my neighbors an opportunity to subscribe for the "Old Reliable," but they seem to think information gained at second hand is just as good, and cheaper, as they frequently come to me with queries. The answer usually is a copy of your paper with special articles on topics which interest them. But such is humanity." Yes, such is humanity. But think of the good our friend is doing. THE KANSAS FARMER has for its main purpose the promotion of the prosperity of the farmers of Kansas. The publishers are well pleased if every copy is borrowed and read by several farmers. The descendants of the borrowers are apt to become subscribers and thereby get the full benefits of the "Prosperity Promoter's" weekly visits. THE KANSAS FARMER has been in this business for forty-three years and has seen the borrowers' recognition of the ability of the paper to help in their labors.

BLOCKS OF TWO.

The regular subscription price of THE KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, every old subscriber is authorized to send his own renewal for one year, and one new subscription for one year, and one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one dollar. Address, The Kansas Farmer Company, Topeka, Kans.

Ellis County has prospects for the largest crop of corn ever raised within her borders. In the vicinity of the Hays Branch Experiment Station 7½ inches of rain fell during the last week of June and the four weeks of July, and corn in some fields is practically made.

The farmers in Ellis and adjoining counties are thrashing now and reports come in that the yield and quality of grain are much better than was anticipated. Some localities report wheat averaging from 15 to 24 bushels to the acre.

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Miscellany

Where the Earthquake Centered.

DAVID STARR JORDAN, PRESIDENT LELAND STANFORD UNIVERSITY.

So far as our earthquake is concerned, this much is evident: The center of disturbance was in the sea, and at a considerable distance from San Francisco. Even the great fault itself lies three or four miles west of the Cliff House, and the center of trouble from which this cleft extends can not be nearer than Cape Mendocino.

No one can predict earthquakes, and to discuss probabilities in relation to them is very uncertain business from the geological standpoint. But there are certain probabilities to be recognized, and among these are the following:

Earthquakes of the California sort, i. e., non-explosive or "tetonic" earthquakes, due to a crack in the rock crust of the earth, always run along old lines of fault. Whether due to overloading of the crust or to some other cause of strain, it is always the old breaks or lines of weakness that yield first. When the great Tomales-Portola fault yielded to the stress and opened for its whole length on April 18, the stress was probably at its maximum. As this fault does not touch San Francisco, that city can never feel its full intensity. The strain having been relieved for two hundred miles on land and at least as much more in the sea, there is no likelihood of a repetition of the shock for a generation or two. While the cleft is fresh, the region may fairly be assumed to be immune to earthquakes. The little earthquakes which follow are details of settling down, and such wavelets of adjustment follow every great disturbance.

Whether the center of disturbance is off Cape Medocino or with the turbulent Bogoslof Islands, in Bering Sea, our part in it is doubtless finished. It was fire, not earthquake, which threw San Francisco for the time into "the dust of defeat." It is certain that in new San Francisco our engineers will see that the future water-mains cross neither the earthquake fault nor the made ground over swamps and brooklets.

There is no more reason for expecting another earthquake or catastrophe at San Francisco than at any other town in any country which borders the Pacific. Wherever mountain-making is still going on, the crust will sometimes break and the soil will tremble.

Good Seed-Wheat.

Not in many years has the demand for good seed-wheat been so great as it is now. At least this is the experience of the writer. It shows that the teachings of practical farmers, the experiment stations, and the agricultural press along the lines of seed-breeding are bearing fruit. THE KANSAS FARMER has several advertisers who have choice, clean seed-wheat for sale, and desires to say that these gentlemen are perfectly reliable. The Karkov wheat advertised is the new red Russian wheat that is so hardy and such a heavy yielder. The Zimmerman is an old favorite with Kansas farmers, and the field from which this seed was taken made a yield of 45 bushels per acre of 63-pound wheat. While the first cost of good seed-wheat seems a little higher than that of ordinary seed, in reality it is much cheaper. It is cheaper to plant good, clean seed, every grain of which will grow and the yield from which will be 40 bushels or more per acre, than it is to plant the ordinary kind that is mixed with other seeds and foreign matter and that will produce only 15 bushels per acre. Poor seed costs as much in labor to produce a crop as does good and the returns are much less. The farmer who buys good seed is the one who pays himself a high salary.

Secretary Coburn is Known Everywhere.

EDITOR KANSAS FARMER:—The other day you had in THE KANSAS FARMER an item about my little good roads' circular.

Two days ago I received an order, which had enclosed your item, for a copy—the order coming from Seattle, Wash.

It pays to advertise in the "Old Reliable." Truthfully, F. D. COBURN.

The Kansas State Fair.

The Kansas State Fair, which will be held at Hutchinson from September 17 to 22, will be bigger and better than ever. This fair has been a pronounced success from the start and has been growing from year to year. Centrally located and of easy access from all parts of the State, the attendance has always been large. Special efforts have been put forth this year by the management to make of it all that a representative State Fair should be. This fair has always been strong in its live-stock and agricultural display, while the exhibit of machinery will compare favorably with that of many and older fairs. The success of this fair has been very largely due to the personal efforts of Secretary A. L. Sponsler, who is Vice President of the State Board of Agriculture, and has very excellent ideas of what a State Fair should be, and who has been able to carry out his ideas by the active co-operation of the officers of the fair.

It will pay to visit this fair this year and see what Kansas really amounts to as an agricultural and live-stock State. Remember the date and write Secretary Sponsler for a premium list.

Agriculture

Questions Concerning Bromus Inermis.

I have just read your remarks on Bromus inermis in the Kansas Farmer. Please send me Press Bulletin No. 129 and anything else along that line that you have handy. M. A. SMITH.

Mitchell County.

I have mailed to you a copy of Press Bulletin No. 129, giving information regarding Bromus inermis, and have also sent a copy of a letter answering questions regarding the seeding of Bromus inermis. There is little question but that this grass is well adapted for growing throughout Central and Northern Kansas. The greatest difficulty with which the farmers have had to contend in securing a good stand of this grass is poor seed. Last spring, through my recommendation, Geo. T. Fielding & Sons, of Manhattan, secured several thousand pounds of choice Bromus inermis seed, buying the seed only after it had been tested at this station, and at my recommendation. This seed was all sold, and so far as we can learn it has given excellent results. Fielding & Sons intend to again handle a large quantity of Bromus inermis seed of the best quality which they can purchase. They will have some seed for fall sowing. At this station we have had fairly good success with sowing Bromus inermis in the fall. On the whole, however, I prefer to seed early in the spring. If the fall remains favorably wet, however, and you can prepare a favorable seed-bed, I would recommend fall seeding. Should you require further information along this line, please write me again. A. M. TENEYCK.

Time to Cut Alfalfa for Seed.

Not having had experience in cutting alfalfa for seed, I am sending you a sample and wish you would inform me when it should be cut for seed. This is the second crop.

D. ZOOK.

Bourbon County.

Under separate cover, I have mailed you a copy of Bulletin No. 134, in which you will find an extended discussion on the subject of saving alfalfa for seed.

In general it is best not to leave alfalfa until it becomes too ripe before cutting for seed. A good rule is to harvest when two-thirds to three-fourths of the bolls are brown and ripe. If the crop is left until nearly all of the bolls are ripe, the earlier-maturing pods will have burst and wasted their seed. Weather conditions have also much to do with reference to the stage of maturity when it is best to cut alfalfa for seed. During dry, favorable weather, the crop may be left standing longer than if the weather is rainy and wet. Also, during a favorable season for seeding alfalfa, the alfalfa will ripen more evenly than during a wet season. I believe that by reading the bulletin referred to you will secure such information as you desire.

A. M. TENEYCK.

Castor-Beans for Hardpan.

EDITOR KANSAS FARMER:—I happened to be reading an old number of your paper of May 5, 1904, and I noticed a question asked, "How to reclaim gumbo or hardpan land?" We moved to Kansas in the fall of 1870, and took up a piece of prairie land that had such patches on as you mention. In 1875 I made it as mellow as an "ash-pan," by accident. It was during the "castor-bean craze," and we planted with the rest. This patch of ground came within the field. We had not been able to get a plow in the ground over four inches up to this time, and the next spring after the bean-crop was raised, the plow would float to a beam.

This is a rather late answer, but it may help some one. The castor-bean will grow and loosen any hardpan and will sprout the seed.

A. I. IRWIN.

Tombstone, Arizona.

Alfalfa for the Panhandle.

EDITOR KANSAS FARMER:—Among the various crops that are attracting much attention in the Panhandle at the present time, none is more worthy of consideration than that invaluable forage-plant, alfalfa. There has been much speculation among the settlers who are rapidly taking up this plains land as to whether or not alfalfa would grow except in some of the valleys, along the streams, where there is more or less irrigation. Few attempts have thus far been made to grow it upon the high-plains land, but these have met with sufficient success to warrant the statement that alfalfa is one of the valuable crops for this land.

On the X. I. T. Farm, at Channing, there is a field of alfalfa that was seeded several years ago and has stood through two of the driest seasons on record. This field is, moreover, located on a piece of rather inferior land so that the alfalfa has had a very severe test. While there have been times when it made no growth, it has remained alive and ready to produce a rapid growth as soon as the rains came. It has the advantage of annual crops in being on the ground all the time ready to utilize any rain that falls, whether it be in spring, summer, or fall. That it will make good use of a small rainfall is evidenced by the results of the present season. This has been the driest season on record, for this immediate locality, only six inches of rain falling between January 1 and July 24, yet a field of alfalfa, seeded last year on high-plains land, yielded 2663 pounds of very dry hay at the first cutting this season. Without any rain after this cutting, or for some time before, it went on and made a considerable second growth. A portion, that had been drilled in rows and cultivated, yielded 500 pounds dry hay per acre at the second cutting, July 19.

Another field seeded this season had no rain on it for nine weeks after it was seeded, yet the young plants kept green and healthy and growing all that time. These fields have attracted wide attention, and as a result a considerable acreage will be seeded in this neighborhood in the near future.

In seeding this crop in the Panhandle, there are a few considerations that it will be well to keep in mind. One is that the native grass should be thoroughly destroyed before the land is seeded. Otherwise, it will gradually thicken up in the alfalfa and greatly decrease its yield. For this reason, at least, two crops should be grown on the land before it is seeded to alfalfa. Thorough plowing each time and thorough cultivation of these crops are also very important in insuring the complete destruction of the native grasses. This treatment will also help to rid the land of noxious weeds that would otherwise tend to injure the alfalfa crop.

Owing to the high price of the seed, it is more expensive to seed this crop than most others, hence the importance of obtaining a stand at the first trial and of having the land in proper condition to remain in this crop for some years. For the latter reason the land should not only be well cleaned of weeds and native grasses before hand, but it should also be loosened up to a good depth so that it will be in condition to absorb, as nearly as possible, all the rain that falls upon it, allowing no waste by surface run-off.

Spring seeding will probably be the most certain of success, one year with another. The land should be prepared the fall before by plowing deeply and harrowing the land as fast as it is plowed. A horse attached to one section of a steel harrow and led beside the plow team will accomplish this without stopping the plow. The surface should be stirred as often during the fall and winter as is necessary to break up any considerable amount of crust that may be formed as a result of a fall of rain or heavy fall of snow. Unless the fall of rain should be heavy, the smoothing harrow will accomplish the desired result, but if the ground becomes to much settled for the smoothing harrow to produce a proper mulch, the disk harrow should be used.

In using the latter, care should be taken to not get the surface uneven, as that will interfere with getting the alfalfa seeded at a uniform depth. In preparing the seed-bed in the spring, do not stir the ground too deeply as this will cause the seed to be put in too deep. Seed just as shallow as possible and cover thoroughly. A broad-cast drill is the best to seed with. If possible, seed after a good rain as soon as the ground is dry enough to work properly. If a hard rain should fall after the seed is sown and before the young plants come up and a crust should form, go over the ground with a slant-tooth harrow to break up the latter so that the young plants can get through.

For this high-plains land it will be important that seed be secured that has been grown on high, dry land, and especially without any artificial irrigation. If weeds come on in the field, run over it with the mower often enough to prevent them smothering the alfalfa or taking an undue amount of moisture that should go to the latter. If there are no weeds, then clip as often as the alfalfa begins to bloom. This will make it thicken up and grow better. Leave the clippings on the ground as a mulch for the alfalfa unless they should, at any time, be sufficient to smother it; in which case they should, of course, be raked off.

If the land has been properly prepared and the seed is placed at the right depth, twenty pounds of the latter should give a sufficient stand. A moderate stand is better than too thick a stand for this high-plains land. A very thick stand will make a shorter growth when the season is a little dry and a larger proportion of the growth will be left below the sickle. It will also stop growing much sooner in in cases of extreme drouth. In the field, above referred to, seeded last year some very thick patches made no growth that could be cut the second time, while the yield on that in rows was 500 pounds dry hay per acre. Those very thick patches did not make as large a yield the first cutting as where the stand was more moderate. A comparatively thin stand will branch out and thicken up enormously if it is given proper cultivation. I have a plant cut from the field this season that has 140 stalks on the one root.

J. J. EDGERTON.

Hartley County, Texas.

Best Variety of Wheat for Southeastern Kansas.

I am interested to know the best variety of wheat to use for seed in Wilson County, Kansas. I intend sowing there this fall and am anxious to get a good starter. I presume some hard wheat would be best, red Turkey or Russian. What have you to report on the Kharkof variety? Can you furnish seed-wheat, and if so, please name prices, sacked, f. o. b., Manhattan, or shipping point.

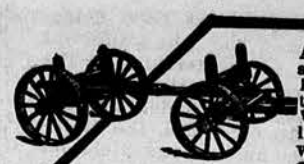
E. C. SEGEN.

Shawnee County.

The soft red type of wheat is well adapted for growing in Southeastern Kansas. On the uplands, perhaps the hard wheat may succeed as well as the soft wheat, but usually for general seeding in your section of the State I would recommend the growing of a good variety of hard red wheat, such as the Fultz, Fulcaster, Mediterranean, Red May, or Zimmerman varieties. The last two varieties named are rather semi-hard when grown in this section of the State, but the Zimmerman especially is hardy and a good producer, and is grown extensively in the Eastern counties of the State. We have a considerable supply of good, pure Zimmerman wheat for sale, price $1.50 per bushel, f. o. b., Manhattan, with extra charge of 15c each for two-bushel sacks. All the wheat which we sell for seed is well-cleaned and all the broken and shrunken grains are removed.

We have some 600 bushels of the Kharkof wheat which we will sell to the farmers of Kansas for seed this fall. This variety has held its high place in comparison with other varieties in the test this season, although at this writing I can not quote comparative yields. The Kharkof wheat, as you know, is a hard red wheat of Russian origin. It has proved to be a very hardy variety both here and at the Ft. Hays Branch Station, in Ellis County, also at the United States, Kansas Cooperative Station, at McPherson. I believe it is one of the best hard red wheats which we have tested at this station. We have a smaller supply also of several other varieties of hard red wheat, which have produced well during the last three seasons, namely: Malakoff, Red Turkey, Defiance, Bearded Fife, and Minnesota No. 529. I have mailed you a copy of Circular No. 1, being a report of grain yields for three years, including the crop of 1905, in which you will find published the comparative yields of the varieties of wheat named.

The results of this season's trial have not yet been computed. The wheat was thrashed some time ago, but in order to secure a pure type of each of the varieties, a shock or two from each plot was saved to be thrashed by hand, hence we are unable to make a report of the yield of the grain until these reserved shocks have been thrashed and the total weight of the grain from each plot secured. From observation in the field before harvest, however, I am convinced that the varieties which have stood high in the test in previous years will again prove to be among the best producers. The yields which have been determined indicate this also. The yield of wheat on some of the increase plots where the wheat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was grown for seed has been determined and varies for the different fields according to the fertility of the soil and preparation of the seed-bed. On relatively poor soil which has received no manure for years, the Malakoff wheat gave an average yield on a field of 10 acres of something over 30 bushels per acre. Other fields of smaller area yielded 40 bushels or more. On some of our most fertile land, which was plowed early and well tilled before seeding, yields of more than 50 bushels per acre were secured. The highest yield yet determined was made by a plot of Bearded Fife wheat one-eighth of an acre in area, namely, 58.5 bushels per acre. This seems a very large yield of wheat, but 439 pounds of wheat were actually thrashed and weighed as the product of this plot. Other adjacent plots yielded 55, 56, and 57 bushels per acre, respectively. The wheat is of good quality and some of it has tested 62 pounds per measured bushel. In this field we had all together 16 acres of wheat, mostly in small plots of one-eighth to one-half acre. These plots included a large number of experiments, such as depth of seeding, thickness of seeding, and test of varieties. Judging from the yields, which have been determined for some of the plots, I believe I can safely estimate that the yield of wheat on all the plots in this field of 16 acres will average 50 bushels per acre.

As rapidly as possible we are determining the yields of grain, and later I shall publish a statement giving the actual yields from the several plots in this field. A. M. TenEyck.

A Wheat Train for Kansas.

The Atchison, Topeka & Santa Fe Railway Company, in connection with the State Agricultural College, plans to run a wheat-instruction train over some of the lines of the system in Kansas this month. In the winter and spring the Santa Fe and the Agricultural College ran "dairy" and "corn" trains over the State, and this is a continuation of the project. Five lecturers from the Agricultural College will accompany the train. They are: Professor Miller, Professor Willard, Professor TenEyck, Professor Brown, and Professor Shoesmith.

It has been the practice of some Kansas farmers to sell most of their good wheat and use the poorest for seed. One of the main purposes of this train and the work of the lecturers will be to insist on the profit by sowing the best wheat. It is estimated that the use of only the best wheat for seed will increase the yield of Kansas wheat from 3 to 5 million bushels a year. The two special trains which have been operated have been successful and it is believed that this one will be of as much benefit to the farmers as the others. The complete schedule of the train follows:

AUGUST 13.

	Arrive.
Wellington	8.10 a.m.
Mayfield	9.05 a. m.
Argonia	10.10 a. m.
Harper	11.30 a. m.
Attica	12.40 p. m.
Hazelton	1.15 p. m.
Kiowa	1.35 p. m.
Sharon	4.15 p. m.
Medicine Lodge	4.45 p. m.
Kingman	8.00 p. m.

Tie up for night session.

AUGUST 14.

	Arrive.
Kingman	7.00 a. m.
Spivey	8.00 a. m.
Nashville	9.10 a. m.
Isabel	10.05 a. m.
Sawyer	11.00 a. m.
Coats	12.30 p. m.
Springvale	1.20 p. m.
Belvidere	2.15 p. m.
Wilmore	3.20 p. m.
Coldwater	4.15 p. m.
Englewood	6.30 p. m.

Tie up for night.

AUGUST 15.

	Arrive.
Ashland	8.00 a. m.
Protection	9.20 a. m.
Cunningham	3.10 p. m.
Cairo	3.30 p. m.
Pratt	3.55 p. m.
Kingman	5.50 p. m.
Castleton	6.30 p. m.
Hutchinson	9.20 p. m.

Tie up for night.

AUGUST 16.

	Arrive.
Partridge	8.00 a. m.
Plevna	9.00 a. m.
Stafford	10.00 a. m.
St. John	10.55 a. m.
Macksville	12.25 p. m.
Lewis	1.30 p. m.
Kinsley	2.30 p. m.
Garfield	3.40 p. m.
Larned	4.32 p. m.
Rozel	5.48 p. m.
Burdette	6.05 p. m.
Jetmore	7.10 p. m.

Tie up for night.

AUGUST 17.

	Arrive.
Larned	7.00 a. m.
Pawnee Rock	7.53 a. m.
Great Bend	9.00 a. m.
Heizer	10.10 a. m.
Shaffer	11.15 a. m.
Rush Center	12.25 p. m.
Alexander	1.35 p. m.
Bazine	2.25 p. m.
Ness City	3.25 p. m.
Beeler	4.35 p. m.
Dighton	5.48 p. m.
Scott City	7.00 p. m.

Go to Ness City and tie up.

AUGUST 18.

	Arrive.
Ellinwood	10.00 a. m.
Chase	10.50 a. m.
Lyons	11.35 a. m.
Little River	12.25 p. m.
Conway	1.20 p. m.
McPherson	2.00 p. m.
Canton	2.55 p. m.
Hillsboro	3.55 p. m.
Marion	4.50 p. m.
Florence	5.45 p. m.

End of trip.

Horticulture

Worms on Cabbage—Lice on Cucumber-Vines.

Will you kindly give me some information in regard to the extermination of worms on cabbage and lice on cucumber-vines? Jos. Hostetler.

Reno County.

Before the cabbages begin to head, it is perfectly safe and a practical measure to apply a spray of lead arsenate or Paris green to protect the plant from the attacks of the cabbage-worm. After heading has begun, it is not advisable to use these poisons, though I think the danger of poisoning the human consumer is less than usually believed. The green outer leaves of the cabbage do not enter into human food, and the poison is not introduced into the plant substances by assimilation on the part of the cabbage. However, it is possible to destroy the greater part of the worms on heading plants by the repeated application of good, fresh pyrethrum or insect powder puffed well in among the leaves, and especially under them where the worms are found. The best time to do this is in the evening. The use of pyrethrum need not alarm the consumer of the cabbage in the least, as it is not poisonous to man.

For the treatment of cucumber-lice, read an article on this topic in the Kansas Farmer for July 19, page 749.

E. A. Popenoe,
Entomologist State Experiment Station.

The Black Locust and Its Borer.

In Colorado we are interested in the black locust as a utility tree. The borer has recently appeared and we don't know whether to take fright, drop the black locust and run, or go ahead and risk the chances.

How is it, anyway? Can you and do you count the black locust in Kansas a reliable utility tree, and do you plant it with safety for use and profit?

Any information, suggestion or advice you can give me will be thankfully received.

W. G. M. Stone,
President Colorado State Forestry Association, Denver, Colo.

The black locust is widely planted as a utility tree, and the nursery sales of this tree to Kansas and Oklahoma planters continue to be good. It is planted especially in the Western part of our State, where the tree-growers find it to be of good growth, generally hardy, and quite useful as timber after it attains sufficient size to serve that purpose. It was thought for some time that the black-locust borer would not reach Western Kansas, and that accordingly it was safe to trust this tree for shade and post timber, but as might have been expected, as soon as there were sufficient trees planted to furnish a highway for the beetle from the infested Eastern part of the State to the Western, the insect found its way there.

Accordingly, it occurs now in almost every part of Kansas where the black locust is growing. True, you will find occasional growers who state that the borer does not occur in their locality, but experience leaves no reasonable hope that these localities will continue exempt. The insect finds no unfavorable conditions for establishment wherever the tree will grow. While its enemy is thus present in practically all localities, or is to be expected in all, the tree is still held in favor to a degree. It will often make posts of fair size before the borer kills it. There are trees in Eastern Kansas that I have seen, measuring a foot and a half in diameter, though borers in the same locality will work damage to younger stock in the neighborhood. These large trees, it should be stated, are in bottom-land where the tree is at home. In drier soil it grows less thriftily, and has less advantage in its struggle with the borer for existence.

If the planter expects to plant largely of the black locust and thereafter give it no attention as to preventing the attacks of the borer, he will no doubt come to the conclusion that this tree is a cumberer of the ground, but if he will study the habits of the borer beetle and give some attention during August to the capture of the adults and the application of repellents to the trees, he will meet with a measure of success. There is scarcely a better post timber, if we except the Osage orange, which, contrary to the general acceptation, has troubles of its own in the way of insects.

E. A. Popenoe,
Entomologist Kansas Experiment Station.

Variation in Plants Induced by Heavy Feeding.

Those who have reported on the work of Luther Burbank, of California, have stated that Mr. Burbank, in growing seedlings, adopts the plan of fertilizing them very highly, claiming that this excessive feeding causes the plants to vary, or "sport," and that the variations which are thus caused can be utilized in producing new varieties. Not every one recognizes this factor in the production of varieties, but Prof. E. P. Sandsten, of the University of Wisconsin, reports a most interesting experiment which he carried on with tomato-plants.

Recognizing the effect of high feeding, Prof. Sandsten undertook his experiment last winter to show the effect upon tomatoes in the experiment station forcing-house. The variety used was Spark's Earliana. The seed was sown in a shallow box, in soil which was a mixture of fine garden loam, sand, and decomposed sod, to which a small amount of well-rotted stable manure was added. As soon as the seedlings were large enough to handle, they were transplanted to three-inch pots, the soil in the pots being made up in the same proportion as that in the seed-box, with the exception that a larger amount of manure was used.

In about three weeks the plants were transferred to the greenhouse-bed, in which the soil was about 7 inches deep, and was made up in the same proportion as the soil in the pots. The plants were set 12 by 18 inches and trained to a single stem. Then commercial fertilizers were made up and applied at the following rate per acre: Nitrate of soda, 800 pounds; sulfate of potash, 600 pounds; dessicated bone, 1,000 pounds. Two applications were made; the first one as soon as the young plants had taken hold of the soil and the second one two weeks later.

"It will be noticed," says Professor Sandsten, "that the amount of fertilizer is excessive and impracticable for all commercial purposes. In fact, the writer was fearful that this large amount would permanently injure or kill the plants."

EFFECT OF THE FERTILIZER UPON THE PLANTS.

In a short time the effect of this excessive application of fertilizers was apparent. Scarcely two plants were alike, and the variations became more marked at the time of flowering. In many instances the blossoms were abnormal, both as to size and form. The author further says:

"One plant in particular, which showed great modifications in the floral parts, was labeled and carefully watched. As the fruit grew it was noticed that the pistil and fleshy part of the ovary developed abnormally, and there appeared to be no evidence of seed formation. During the process of growth and ripening of the fruit, this fact was further emphasized, and when the first fruit was cut it was found to be seedless. The growth habit of the plant, while not excessive, showed a marked deviation from the ordinary type. The leaves were more divided and somewhat curly; they were also much smaller, and the general habit of the stem and branches was more or less decumbent.

"Another plant showed a marked tendency to dwarf; the fruits from this plant were small, not larger than a good-sized walnut. The fruits were almost solid and without seed, though in some instances the seed cavities were noticeable. Between these two special types all the plants in the forcing-house showed more or less modifications from the original type, and in almost all cases there was a tendency of the plants to produce fruits containing a much smaller number of seeds than is generally found in the ordinary fruit.

VARIATION TRANSMITTED TO CUTTINGS.

"Cuttings of the two plants which produced the seedless fruits and others were taken in the spring, rooted

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and planted in pots, and when the weather permitted were planted in the open fields. The plants remained true to type throughout the growing season, and produced an abundance of fruit, with the exception of the two seedless ones. While these remained true to type, the amount of fruit produced was considerably more than was produced in the forcing-house. The size of the fruit was larger and more regular in form. The difference between the plants from the various cuttings was as great in the field as in the greenhouse, and showed no apparent reversion to the original type. This was not expected to any large degree, since the plants were grown from cuttings, though the writer had expected that some degree of reversion might take place. The land on which the tomatoes were grown during the summer was ordinary garden soil. It was well fertilized, and in addition a small amount of soluble fertilizers was added, but not enough to make the land abnormally rich. Cuttings have been taken this fall, and it is the intention to continue the experiment for a number of seasons.

VALUE OF THE EXPERIMENTS IN A PRACTICAL WAY.

"While the two kinds of seedless tomato, as they appear at the present time, have no commercial value, and may never have, the fact that tomato-plants can be so modified in one generation by high feeding is worthy of special notice. That such great changes can be brought about by high feeding is an indication, to the writer, at least, that corresponding results may be accomplished with other plants. It is the writer's intention to extend the experiment of the excessive use of artificial fertilizers to some of our fruit-trees; also to continue the work with tomatoes and other vegetables to produce, if possible, commercial varieties.

"If further work with other plants should verify this experiment and the conclusion drawn therefrom, a fertile field for plant improvement will be opened to horticulturists and others, and many important results may be predicted. The fact that the two seedless tomato-plants are shy producers is in direct line with the experience with animals. Too high feeding tends to produce barrenness in plants as well as in animals. While this tendency is objectionable, it may not be difficult to overcome in plants.

"The writer ventures to suggest that a large share of the many abnormalities in both plants and animals are due to excessive feeding, coupled with other abnormal conditions. Sports of various kinds and degrees have too frequently been explained—or, better, perhaps, mystified—by the use of the much overworked terms employed by breeders.

"The fact that horticulturists and plant-breeders have not, so far as the writer knows, recognized the use of excessive feeding and other artificial means to excessively alter a plant's surroundings to produce extreme variation, is perhaps not remarkable, for often the simplest and most natural methods are overlooked for others more complex. Crossing and hybridizing have been looked upon as the only legitimate avenues to success in plant improvement, and every tyro in horticulture has become a breeder with the mania to produce new varieties.

"It should not be understood that the writer is opposed to crossing and hybridizing as legitimate means in plant-improvement, nor does he want to discredit the work and the results obtained, for the present status of horticulture is due chiefly to such work. The fact, however, remains that some of our fruits and vegetables have been produced by means unexplained by the producer, or if explained, the explanation is hopelessly entangled with wizardry.

"It is the writer's opinion that old plants or trees do not respond to excessive food stimuli to the extent of becoming greatly modified structurally. Trees and plants, after having reached a certain age, become confirmed in their habits and structure, and, while minor modifications may be brought about, there is little hope of producing extreme variations. The work, therefore, must be started with the young seedlings immediately after germination and continued for an indefinite period. In this connection it is worthy of notice that plant-breeders generally give to seedlings better care, better soil, and better attention generally than is afforded in nature or under average cultural conditions. The conditions under which seedlings are grown are oftentimes the starting point of variation, and undoubtedly many valuable fruit and plant productions in the past owe their origin to nursery treatment, or abundant food supply, rather than to crossing and hybridizing. This statement may seem extravagant, at a first glance, but bearing in mind the fact that seedlings are by their nature more plastic than older plants, and that by the removal of all external factors which in any way tend to retard the plant, or, in other words, by making the surroundings wholly unnatural, changes in the plant are inevitably produced.

"Sexual mixing is now generally supposed to be the only way of producing variation or of breaking up the type. To this the writer emphatically dissents—natural and artificial environment, especially the latter, can and do produce extreme variation when patiently and intelligently directed."

Professor Sandsten's experience with the tomatoes is in line with that of Mr. Burbank. The latter, in producing a lot of seedlings, feeds them very highly to break up the type, and by careful selection he can fix the desired type so that it will be permanent. Professor Sandsten's experience, however, in causing such a wide variation with the tomato, in a single generation, is rather remarkable, and his report is most interesting.—The Fruit-Grower.

The Influence of Forests Upon Precipitation.

A prominent citizen of Finney County recently addressed an inquiry to the Chief of the Weather Bureau on the question indicated by the above caption, but, broadening the scope of his subject, vegetation and plants were included with trees.

The reply to this inquiry by the Chief of the Bureau is as follows:

"Much careful study has been given to this subject, especially as regards the influence of forests, but we have no proof that any of the agencies you mention has any appreciable effect upon rainfall. Such an influence has sometimes been assumed because of the occurrence of abundant precipitation over forest areas, but this is merely confusing cause and effect, since it is the rainfall that produces the forest and not the forest that causes the rain.

"It is true that by transpiration vegetation adds a considerable amount of moisture to the atmosphere, and this moisture will be eventually reprecipitated as rain, perhaps at a great distance from the place where it was evaporated.

"But we can not affirm that vegetation increases the sum total of evaporation and precipitation, since the water thus transformed into vapor not only decreases the amount available for evaporation by other agencies, but at the same time diminishes the evaporating power of the atmosphere. It must also be remembered that vegetation hinders evaporation from the immediate surface by protecting it from direct sunlight.

"The beneficial influence of forests in conserving the supply of rain and snow, retarding run-off, diminishing floods, and regulating the flow of streams and springs is generally recognized.

"I enclose a brief list of papers on this subject, most of which you can probably consult at any large city or university library."

List of articles on the relation of forests to precipitation:

Forest influences. Bulletin 7 of the Division of Forestry, U. S. Department of Agriculture. 197 pages.

Forests in their relation to rainfall. (J. H. Maiden.) Journal of the Royal Society of New South Wales, 1902, vol. 36, p. 211-240.

Deforestation and climate. National Geographic Mag., 1905, vol. 16, p. 397-98.

Journal of Geography, Chicago, 1904, vol. 3, p. 47-50.

Forests and rainfall in the Hawaiian Islands. Bull. of the Am. Geog. Society, N. Y. Vol. 36, p. 689-90.

Hann's Handbook of Climatology (Ward's translation), p. 191-197.—Climatological Report; Kansas Section.

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Cherry Run, W. Va., February 7, 1906.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.
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Yours truly,
EUGENE G. BUTTS.

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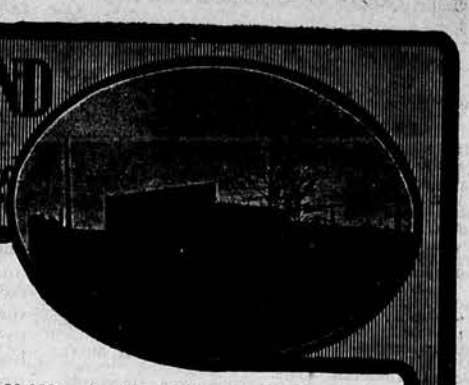

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Does its work accurately.
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Stock Interests

PURE-BRED STOCK SALES.

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

August 15, 1906—Maple Hill Shorthorn Sale. H. C. Duncan, Osborne, Mo.

September 20, 1906—Duroc-Jerseys at Hutchinson State Fair, N. B. Sawyer, Cherryvale, Kans.

September 26, 1906—Peek, Putman and Lamb Bros. Tecumseh, Neb.

September 25, 1906—Valley Brook Shorthorns, J. J. Mason, Overbrook, Kansas, owner, T. J. Wornall, Liberty, Mo., Manager.

September 25, 26, 27, 1906—Hope Agricultural and Live Stock Fair & Sale. H. R. Little, Secretary, Hope, Kans.

Oct. 2, 1906—Shorthorns and Poland-Chinas, M. C. Vansell, Muscotah, Kans.

October 2, 3 and 4, 1906—Shorthorns, Herefords, Angus and Galloways. During State Fair. W. F. Hurlbut, Manager, Sedalia, Mo. Entries solicited.

October 2, 3 and 4, 1906—Berkshires, Poland-Chinas, Duroc-Jerseys and Chester-Whites. During State Fair. W. E. Hurlbut, Manager, Sedalia, Mo. Entries solicited.

October 2-3-4-5, 1906—Glasco Live Stock Association sale of pure-bred stock, Glasco, Kans.

October 10, 1906—H. L. Faulkner, Jamesport, Mo.

October 11, 1906—American Galloway Breeders' Association Combination Sale, Kansas City, Mo.

October 17, 1906—W. J. Honeyman, Madison, Kans.

October 17, 1906—Poland-Chinas, W. A. Pruitt, Asherville, Kans.

October 18, 1906—East Lynn Herefords, Will H. Rhodes, Tampa, Kans.

October 18, 1906—Choice Duroc-Jerseys. C. A. Wright, Rosendale, Mo.

October 18, 1906—Poland-Chinas, W. A. Davidson, Simpson, Kans.

Oct. 19, 1906—Frank Micheals, Summerfield, Kansas, Poland-Chinas.

October 20, 1906—W. R. Dowling, Norcatur, Kans. Poland-Chinas.

October 23-24, 1906—E. A. Eagle & Sons, Agricola, Kans.

October 24, 1906—Poland-Chinas, Frank A. Dawley Waldo, Kans.

October 25, 1906—D. W. Dingman, Clay Center, Kans., Poland-Chinas.

October 25, 1906—Poland-Chinas. T. J. Triggs, Dawson, Neb.

October 26, 1906—Poland-Chinas. O. W. Stalder, Salem, Neb.

October 27, 1906—Poland-Chinas. Chas. A. Lewis, Beatrice, Neb.

October 25, 1906—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.

October 30, 1906—Leon Calhoun's sale of Poland-Chinas at Atchison, Kans.

October 31, 1906—Poland-Chinas. O. B. Smith, Cuba, Kans.

November 1, 1906—Poland-Chinas. Carl Jensen & Sons, Belleville, Kans.

November 1, 1906—Frank Zimmerman, Centerville, Kans.

November 1 and 2, 1906—Herefords and Shorthorns, Kansas City, Mo., W. C. McGavock, Mgr., Springfield, Ill.

November 6, 7, 8, 1906—Sale of all beef breeds, Kansas City Sale Pavilion, R. A. Ford, Lawson, Mo., Manager.

November 8, 1906—T. P. Sheehy, Hume, Mo.

November 13, 1906—Howard Reed, Frankfort, Kans.

November 14, 1906—Poland-Chinas. F. R. Barrett, Cadmus, Neb.

November 16, 1906—G. M. Hebberd, Peck, Kans.

November 20-23, 1906—Blue Ribbon sale of all beef breeds, D. R. Mills, Mgr., Des Moines, Iowa.

November 27, 1906—L. C. Caldwell, Moran, Kans.

December 4, 1906—Poland-Chinas, Lemon Ford, Minneapolis, Kans.

December 6, 1906—American Galloway Breeders' Association Combination Sale, Chicago, Ill.

December 11-12, 1906—James A. Funkhouser and Charles W. Armour, sale pavilion, Kansas City.

Jan. 17, 18 and 19, 1907—Shorthorns, Aberdeen-Angus and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill.

Feb. 7, 1907—Ward Bros., Republic, Kans., Duroc-Jerseys.

Feb. 18, 1907—C. W. Taylor, Pearl, Kans., Durocs.

February 19, 1907—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.

Feb. 20, 1907—J. E. Joines, Clyde, Kansas, Duroc-Jerseys.

Feb. 21, 1907—Leon Carter & Co., Asherville, Kans Duroc-Jerseys.

February 28, 1907—Wichita, Kansas, Poland-China bred sow sale, J. C. Larrimer, Derby, Kansas, Mgr.

April 3, 4 and 5, 1907—Herefords, Aberdeen-Angus and Shorthorns, Kansas City, Mo., W. C. McGavock, Mgr., Springfield, Ill.

May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill.

Improved Stock Breeders Association of the Wheat Belt—November 13, 14, 15, 1906, at Arkansas City, Kans., I. E. Knox, Nardin, O. T., manager; Dec. 5, 6, 7, 1906, at Anthony, Kans., Chas. M. Johnston, Caldwell, Kans., manager; Dec. 18, 19, 1906, at Wichita, Kans., J. C. Larrimer, Derby, Kans., Manager; Feb. 13, 14, 15, 1907, at Caldwell, Kans., Chas. M. Johnston, Caldwell, Kans., manager.

Killing Hog Lice With Crude-Oil.

W. P. SNYDER, SUPT. NEBRASKA EXPERIMENT SUB-STATION.

Lice on hogs are a continual menace to the production of pork. No matter what the feed may be or the other conditions, if lice are allowed full sway, pork can not be produced with profit for but a short period. The lice never cease annoying the hogs and they multiply so rapidly that a few weeks of warm weather will allow a herd to become thoroughly infested. Many a fine litter has been stunted because the lice were not killed.

METHODS EMPLOYED.

Any treatment that maims one louse is better than no treatment. In my boyhood days a corn-cob and a can containing coal-oil were the chief weapons. These were quite effective where there were only two or three sows on the farm and a half dozen boys to dose them, but where a herd numbers twenty-five or 100 or more, some quick and efficient method must be employed. During the past few years many dipping-vats have been put into use throughout the country. Dipping is the most satisfactory method yet employed for ridding hogs of lice. We have been dipping our hogs on the experimental substation for three years, usually dipping in the spring and fall, and once during the summer. We dipped twice at intervals of eight days, each time. We used whichever one of the commercial coal-tar dips it was most convenient to use. The results were fairly satisfactory, but even when following this method quite thoroughly, it was with difficulty that we kept the lice under control. The time required and the labor of dipping so often was considerable. If the dip was not quite strong enough, the operation had to be repeated; if too strong, the pigs were blistered. With some of the dips the water had to be heated to get the desired results. This required time and expense. With all the dips, the hogs had to be kept in the vat about two minutes. This is a difficult matter, as two minutes seems a long time to the operator, and occasionally a hog will slip through without having been in the vat ten seconds. These were some of the difficulties we could not overcome. Yet it is the method that has given the most satisfactory results and is advocated by the leading hog-raisers. I would not discourage dipping with these preparations only in case one can procure something more efficient.

CRUDE-OIL.

Our cattle were sprayed this spring with crude-oil by the Seaburg Live-Stock Spraying Co., and a barrel of crude-oil was left us. We dipped about 400 pigs and old hogs in this and in every way found it much superior to any dip we have used. I can see only one objection to its use and that is that it may increase the danger from fire where hogs are kept in the main farm-buildings. However, hogs should be out in pasture with rather inexpensive open sheds at the time of year dipping should be practiced. Where oil is to be used, it may be found advisable to place the dipping-vat at some distance from the barn. The advantage in using crude-oil over ordinary dips may be summed up briefly as follows:

The work is thorough.

The time and labor, and the worry on the hogs is decreased greatly.

One dipping is sufficient.

The dip does not require heating.

There is no danger of getting the dip so strong that it will injure the hogs nor so weak that it will not kill the lice.

The oil stays on the hair and kills the young lice as they are hatched and any old ones that may have awaited the return of the hosts.

The hogs disinfect their sleeping quarters, rubbing posts and every place to which they are in the habit of going. The lice that return in a few days with ravenous appetite find death, rather than a luxurous feast. The oil is still effective long after other dips have disappeared.

HOW TO USE OIL.

It is pre-supposed that every farmer raising many hogs has access to a dipping-vat. The way we use the oil is to fill the vat to within ten inches of the top with water and add about two inches of oil. The hogs are then rushed in as fast as they will go. They plunge down through the oil, into the water, up through the oil and onto the dripping floor. A few seconds is all the time required. When hogs are being crowded through rapidly, the oil and water are kept pretty thoroughly mixed.

Just how small an amount of oil will prove efficient I am not prepared to state. We used a half barrel in dipping about 400 hogs and pigs. Less oil would no doubt have served the purpose, as the last hogs dipped were not as thoroughly oiled as the first ones, yet all the lice were killed.

KILLED THE LICE.

We used oil in the dipping-vat this spring for the first time. The hogs and young pigs especially were very lousy. No live lice have been found since the hogs went through the oil. We searched for lice shortly after the pigs came out of the vat, and have been on the lookout for live lice since.

The American Carriage Horse.

EDITOR KANSAS FARMER:—It has been said that when there is a strong and persistent demand for anything in this country, we have always been able to meet it.

This comes from the fact of our almost boundless natural and acquired resources and our energy, skill, and enterprise. When we go after a thing we generally get it, "if it takes all summer" as Grant would have said.

That there is a strong and steady demand for a type of horse known as the American carriage horse goes without saying, and the further fact, that the Bureau of Animal Industry is making experiments along this line deepens the conviction. The statement is current in the papers that Alfred Vanderbilt, of New York, has recently paid M. H. Tichenor & Co., of Chicago, $35,000 for a four-in-hand show team of American carriage horses, this being a record price for a team of this type.

While the efforts of the Government are helpful and suggestive, the finishing touch and final success will come, as it always does, from individual efforts. When the intelligent, energetic, and enterprising individual put his energies and money into an enterprise, he usually brings it to a successful termination. That the production of the American carriage horse is a difficut task, no one denies. This comes from the fact that this type of horse requires more attributes to fulfill his mission than any other living thing, except the ideal human being. Aside from the qualities demanded of the other classes of horses, such as proper size, strength, energy, nerve force, soundness, and durability, the carriage horse must have in addition and as his crowning features, style, action, beauty, grace, symmetry, and manners. Barring manners, there is no quality of the carriage horse that demands more attention of the breeder than action.

In estimating the relative merits of the high stepper, as he is sometimes called, the judge usually accords from forty to fifty points out of the one hundred to action. This horse to be a star must have high, free, bold, round, straight, progressive, and frictionless action, both fore and aft, and at the same time be handsome. Here the breeder finds his problem.

The English Hackney has been bred for generations for high knee and hock action, so this trait is quite well established in the breed. But there seems to be a kind of dwelling in the Hackney action that does not exactly meet the popular demand. While the American likes to "fly high," he likes to go along some in the meantime. It is this element of progression shown by the American trotter that is so taking when exhibited in connection with other carriage horse traits. While it is true that some of the most phenomenal and sensational performers in the show-ring were strictly trotting bred horses, they were the result of accident, as these qualities are not characteristic of the breed, yet there are some valuable suggestions contained in the performance. They show that the elements of a strictly prime carriage horse are found in some families of the trotter. Many go so far as to advocate the plan of producing the American carriage horse wholly from the ranks of the American trotter. It is understood that the experiments of the Government in horse-breeding, which are being inaugurated in Colorado, are along these lines. This experiment will be watched with much interest. While the writer admits the possibility of this proceeding, he regards it as a long and tedious route, and thinks he sees a much shorter and better way. The English Hackney is a highly finished horse in most respects. He has a splendid top-line, blood-like head and neck, large, mild eye, fine, thin, pointed ear, high withers, sloping shoulders, short back, strong but smooth coupling, a long croup and a high-set tail, much quality, and we may add splendid feet and legs; he is lacking mostly in size and extension in gait. Could not a union of these qualities of the Hackney be most profitably combined with our large size, 16 to 16½ hands high and 1100 to 1300 pounds in weight, rangy and long-gaited trotting-bred mares for the production of the American carriage horse? It is conceded that the sire in a large degree controls the outward appearance of the foal, while the dam gives the size and inward traits. In this union we could reasonably expect a colt of fine finish with increased size and extended gait. In a general way, there is no stronger bred or more highly finished horse in the world than the Hackney, except perhaps the English Thorough-bred, but as before said, he is lacking in size, length of neck, and gait extension. The properly selected trotting-bred mares will supply these deficiencies. We must bear in mind that a small, dim eye, a thick coarse ear, an ewe neck, a goose rump, or crooked hind legs are fatal to the carriage horse or high-stepper type. The American coach horse is quite similar in type to the American carriage horse except in height and weight.

The ideal size for the carriage horse is 15 hands high in height, and weighs from 1250 to 1400 pounds. This latter type of horse is best produced by a union of properly selected trotting-bred mares with either the French or German coach horse. Since the coach horse is much larger than the carriage horse, more coarseness can be

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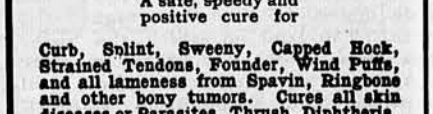

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Will not rust or rot out and will last a life time. Every breeder should use them. Prices furnished on application.

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BARTLETT'S LUMP JAW CURE

It has stood the test and has cured thousands of cases. Don't fool with untried remedies. No matter how bad or how long standing Bartlett's Lump Jaw Cure will do the work. A positive and thorough cure easily accomplished. Latest scientific treatment. Unexpensive and harmless.

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Keeping Flies Off Cows, Horses, Mules and all Live Stock.

Indispensible in dairy and stable. Saves annoyance and irritation. Cows rest easy, digest and secrete their food better and produce more milk and butter. It makes milking easy and safe; protects teams. Will not gum the hair. Easily and cheaply applied with sprayer. Buy now; use before the animals run down. At dealers. Quart 40c; ½ gal. 60c; gal. $1. Trial gallon direct, express paid, $1.25. Don't take a substitute. Illustrated book free. Address,

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Is happy because he is being FREED from LICE that torture and torment. August, September October, are best months to dip hogs to kill lice. DIP-OLENE, the best Hog Dip, works quickly and thoroughly. It KILLS HOG LICE, destroys all disease germs, prevents HOG CHOLERA, saves loss, keeps your hogs healthy and growing. Every hog-raiser needs it. DIP-OLENE is easy to use; the cheapest hog insurance you can buy. Write for booklet and enough dip to make a gallon, FREE.

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THE KANSAS STATE FAIR HUTCHINSON, SEPT. 17 TO 22, 1906

17 General Departm's

This fair is for all the people—this includes the children. A day or two at a big fair is a most valuable experience for children. It promotes the ideal and gives them something to think and talk about, relieving the hum-drum of all-work days. This is also applicable to men and women regardless of their vocation. The 15 great races, with horses representing the best trotting and pacing blood will be worth the days spent in seeing them. The 17 General Departments represent the entire industrial occupation of the people and all is arranged upon an educational system. 700 stalls and pens filled with cattle, horses, sheep and swine will be worth the attention of stockmen and farmers of the entire southwest. The model dairy with the machine milking the cows and the process of butter making from warm milk to the finished product in the refrigerator is worth seeing. Cornet bands will furnish the music every day, carnivals and attractions of all kinds including a fine balloon ascension each day will provide amusement. The new electric railroad will carry the people right to the gates. Grounds open at night and lighted by electricity. This is the great annual social, intellectual and recreational week for the people of Kansas and everybody is invited. Competition is open to all. Send for catalogue and exhibit something. One fare on all railroads to Hutchinson. Ask your agent about it. 32 regular passenger trains daily—also special excursion trains on all roads. The State Fair this year will excel all former successes.

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15 Great Races

A. L. SPONSLER, Secretary

tolerated. Yet after all, he must possess much quality and fine finish with high, straight and all-round action.

Might not the breeding principles adapted by L. H. Kerrick, of Illinois, the world renowned cattle-breeder, in establishing a type of steer for the most economical beef production be adopted by the horse-breeder?

Mr. Kerrick said in relating the story of his success at the Iowa State Institute that when he commenced the feeding business he could not find a breed of cattle that produced a type of steer exactly to his liking, but he could see all the beef points in two breeds, viz., the Shorthorn and the Angus. So he procured a lot of the best grade Shorthorn cows that he could pick up. Then he got an Angus bull as near his ideal type as could be had. From this stock he procured his feeding steers, keeping the best heifers for breeding stock. In all his after breeding, he used the bull that was nearest his ideal beef type. Every one who has kept in touch with the great cattle-feeders of the country knows of Mr. Kerrick's success. He commenced about twenty years ago and was successful from the start. His last effort was in feeding a hundred steers of this breeding. Three carloads of this hundred took prizes as car-lots at the late International stock show, at Chicago, and the balance of the herd topped the market for prime steers. Was not this a shorter and better route to success than to have tried to get his type of beef steers from some breed that did not have the type demanded, except in very rare and remote instances? The fundamental principles of breeding are the same wherever applied. Rightly applied they mean progress, but if not they mean retrogression or, at least, little progress.

While it may seem more patriotic to make the effort to develop the American carriage horse wholly from native material, it, at the same time, might not be quite so expedient. It quite frequently happens that our patriotism, love, or prejudice runs counter to our judgment. It would be considered the height of folly if our artisans should disregard wholly the examples of foreigners in canal-digging, ship-building, ordinance-construction, architecture, or agriculture. A careful study of and a judicious use of the accomplishments of others means progress. But, however this may be, the practical man is not going to fool away his time on sentiment. He is results he is after and he will not be long in showing the way.

N. J. HARRIS.

Secretary American Horse Registry Association, Des Moines, Iowa.

The Maple Hill Shorthorn Sale.

In addition to having 10 of the best bulls that have gone into any sale this year, Mr. H. C. Duncan has made an assortment of stock that will be here to suit the buyers who attend his sale at Maple Hill, Mo., on August 15.

One specially attractive feature of the sale is the large number of pure Cruickshank animals in the offering. Another feature is the wonderful evenness of the entire offering. The animals all look alike and are all good. Still another feature is the offering of 2-year and yearling heifers that were sired by Mr. Duncan's great herd-bull, Magnet 199058. Eight of the dams in the pedigree of this bull were bred by Cruickshank. Of the 40 females in this sale, 15 are of Cruickshank's best families and the remainder are from seven-eighths to fifteen-sixteenths Cruickshank blood. Among the cows may be named that grand matron, Victoria of Glenwood 5th by Violet Spur 144047. She is a fine specimen of the purest Cruickshank breeding and will have a heifer at her foot by Headlight. Gloster of Maple Hill by Victoria 150650, Nick Martin's great bull, has a calf at foot by Violet Chunk 238693 that is a wonder and would be cheap at $500. Another choice thing is Ury of Maple Hill by Baron Dudding 125042 who will have a yearling heifer in the sale as well as a calf at foot. Flora Maple is described by her owner as being "good goods" and she is all that. She is by Geneva Champion of Maple Hill 151 and has a calf at foot by Magnet. Maggie Sharon by Magnet is one of the good ones of the herd and ought to sell well. Maple Hill Violet 16th is regarded by Mr. Duncan as one of the best heifers he ever bred and this is praise indeed. Few Shorthorn families have made such a record as have the Violets. Every female of breeding age will either have a calf at foot or be bred to one of Mr. Duncan's great herd-bulls. Visitors can best reach the sale by taking the Quincy, Omaha and Kansas City Ry. from the foot of Wyandotte street, Kansas City, and stop at Maple Hill which is on the farm. The catalogues are ready and may be had by writing H. C. Duncan, Osborn, Mo.

Miss Cowan's Handsome Poster.

The publicity department of the American Royal Live Stock Show is distributing a handsomely colored poster advertising this year's show, which is to be held at Kansas City, October 6 to 13. The poster is in five colors. The central figure is that of a handsome girl, and is surrounded by a circle of heads of typical animals of the several breeds included in the Show. The poster is pronounced one of the most artistic of the series issued by the American Royal.

Especial interest attaches to this poster by reason of the fact that it was designed by Miss Cora E. Cowan, of Chicago, daughter of B. O. Cowan, assistant secretary of the American Shorthorn Breeders' Association. Miss Cowan is a young artist of decided talent, her work having received much praise from leading artists of this country. Her pronounced success in this, her first venture in the field of poster designing, would indicate that she is destined to achieve prominence in this line of work.

Ten thousand copies of this poster are being sent out to railroad stations, banks, business houses and breeders. As long as the supply last copies will be sent free on application to Jno. M. Hazelton, superintendent of publicity, American Royal Live Stock Show, 1710 West 16th St., Kansas City, Mo.

Hubbard's Hogs.

Everybody knows Col. T. A. Hubbard, of Wellington, Kansas. The genial Colonel imagines that he is a politician and in proof of this he cites his long record of active work for his party and clean politics and the fact that he is now county treasurer of Sumner County, Kansas, the biggest wheat county in the world. This is all true, but bigger and better than all this is the fact that Col. Hubbard is a breeder of swine, and any man who can make two Poland-Chinas grow where one scrub grew before is a public benefactor. As a swine-breeder he is a success. He breeds both Poland-Chinas and Berkshires, and they are top-notchers. He won grand sweepstakes on his herd at three Kansas State Fairs, all breeds competing. Would you like to know why? Because he has at the head of his Poland-China herd such boars as Lamplighter Jr 35311 by Lamplighter 26890; Meddler 39541 by Meddler 999999 A 395415; Simply O. K. Jr. by Simply O. K. 24290 and Perfection 38771 by Standard Perfection 32392. At the head of the Berkshire herd stands Rutger Judge 3d 29680; Hubbard's Jumbo 85973, Baron 86921 by Berryton Duke 72946, and Royal Dick 88116 by Deer of W. 72525. That is why. Col. Hubbard has a nice lot—the nicest lot he ever had—to choose from, so if you write or see him soon you can get the choice of the bunch.

Gossip About Stock.

"Scours and Thumps in Swine—The Cause and the Remedy" is the title of an interesting little pamphlet published by the Agriculturist's Remedy company, 523 Kansas Ave., Topeka, Kans. Send for it. It's free.

Mrs. C. E. Beard & Sons of the Adolph Riecke farm, near Green Ridge, Mo., have bought from the Buchanan Stock Farm, of Sedalia, Mo., the good Hereford sire, Elegant 111212, to head their herd. This bull has impressed his good qualities on the Buchanan Farm herd, where he leaves about forty of his get. This herd will be headed hereafter by the grand young bull Bell Boy 214505, one of the best individual sons of Longfellow 111213.

Mr. C. W. Merriam, owner of the Alysdale Shorthorns, Topeka, Kan., reports the recent sale of the choice young bull, Knight of Alysdale 240394 by Proud Knight, one of the best sons of Gallant Knight to Daniel F. Bitler, Olpe, Kans. The dam of this bull is a fine cow who traces to Tom Thornton. This young bull is a fine type of Shorthorn and will doubtless prove a gold mine to Mr. Bitler. There are others as good at Alysdale.

R. H. Weir, proprietor of the Decatur County herd of Poland-China hogs, Oberlin, Kans., has placed a new ad in THE KANSAS FARMER and regarding his stock says: "My spring crop of pigs are giving a good account of themselves these days. I have a very choice litter of nine out of Sadie Reserve, a granddaughter of Corrector, that is simply great; another out of Corrector Beauty, a fine bunch of ten; also a litter of six, farrowed May 15, out of Amy 3d, she by J. T. Painter's herd-boar Meddler. I might name a number of sows with extra fine pigs. I expect to show at the leading fairs."

James Holmes, of Densmore, Kans., has a boar sired by Guy Hadley, which is almost as perfect an animal as we ever saw, and he is proving himself to be also a good breeder. Mr. Holmes is a beginner, but he has some excellent sows in his herd, among them being Lady Gwendoline 96638, a daughter of Gwendoline, the good sow owned by Frank Dawley. Also Maud H 92592 out of Portis Queen, and several others of excellent breeding. Mr Holmes has several litters of spring pigs which he is offering for sale through THE KANSAS FARMER, among them being a litter by E. L. 2d., Dawley's great herd-boar. It will pay you to write him or to visit his herd.

A visit to the home of Lemon Ford at Minneapolis, found every thing in a first-class condition, and while Mr Ford is short on spring pigs, he has about thirty head which were farrowed last fall, which he is keeping over for his spring sale to be held some time this February. Mr. Ford has two good herd-boars, Keep Coming 2d. 37115 and Sunshine 39030, which are the sires of most of his pigs. They are the early-maturing, quick-feeding type, and their offspring gave excellent satisfaction to those who bought them in his last winter's sale. Mr. Ford is one of the substantial farmers of Ottawa County and any one who deals with him will get fair play.

J. F. Staadt, Duroc-Jersey breeder, of Ottawa, Kans., has a few good pigs for sale sired by Nelson's Model and Aaron. Nelson's Model 2205 is the hog that won first in class at Nebraska State Fair in 1903 in a contest with over sixty animals. Model is a good individual, being large, smooth, well colored and possessing a good strong back, heavy hams, and good limbs. In addition to winning at Lincoln he has won in a number of contests at Southern Kansas Fairs. Mr. Staadt's other boar, Aaron 43911, is a long, low down, deep-bodied hog with a good head and ear and excellent feet and legs, and has the making of a great boar. A pig by any one of these animals and out of such sows as Mr. Staadt keeps will be a money-maker. If you want a good one, write Mr. Staadt.

Few young men have grown more rapidly in their professions than has Col. Lafe Burger, of Wellington, Kans. Col. Burger is now one of the ablest and best known live-stock auctioneers in the West, and the demands for his services from other States is rapidly increasing. Just now he is conducting a series of three very important sales in Illinois, in which State he has booked dates for a number of other sales of equal importance. He has booked a number of dates for sales in Missouri this fall, and has a large number booked for Nebraska where he is very popular. Col. Burger is well posted on values and sure gets the money. This makes him especially valuable to swine-breeders who hold public sales. Col. Burger's list of Kansas sales already booked is a long one, but he still has a few good dates. Write him.

H. W. McAfee, Topeka, Kans., has some mighty good Shorthorn cattle for

(Continued on page 824.)

Get All Your Wool Is Worth.

Wool Growers! Buyers in the country are trying to obtain your wool at a low price to make up for last year's losses.
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IT CURES THEM ANYWAY.
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Home Departments

CONDUCTED BY RUTH COWGILL.

The Summer Rain.

No cooling breath the leaves caresses,
The sun beats down, the heat oppresses
This quiet summer's day.
The flowers their dainty heads are bending,
No odors with the noontide blending,
Hushed is the song-birds' lay.

Now upward come the dark clouds lashing
With lightning flash, and thunder crashing
And rain so fiercely blown
That trees beneath its weight are bending,
Adown the lanes are torrents wending
With twigs and leaflets strown.

With rush and rattle, dash and clatter
Upon the roof the raindrops patter
And dash against the pane.
Among the long and tangled grasses,
Among the shrubs—the storm cloud passes,
And all is peace again.

With crystal drops the leaves are dripping.
Along the branches birds are tripping,
Caroling cheerful lay.
Receding clouds the sun discloses;
In beauties new unfold the roses
Along the garden way.
The breezes fresh new life are bringing,
On every side joy notes are ringing,
Our hearts are light and gay.
O think we when the drops are falling
That darkling rain from earth is calling
A newer, fairer day.

—A. J. Wilson, Dickinson County.

Sow Thy Seed.

Coney Island is a popular seaside resort in the vicinity of New York and Brooklyn, and is only five miles long and about three-quarters of a mile wide. It has a fine beach and is a pleasant and healthful place, easily reached by boat and both electric- and steam-cars, so that not only the favored few, but the masses may enjoy its balmy breezes. Through the agencies of benevolent and thoughtful ones, a summer home for the poor of the slums of New York City has been provided here, and many of these unfortunate ones are enabled to revel in the sunshine and inhale the sea-breeze, who were strangers to these life-giving elements of nature.. This fresh-air home is called "Sea-Breeze," and is maintained by the New York Association for Improving the Condition of the Poor. And a splendid work it is doing. In the course of the work, the association came in contact with a large number of children who were victims of that terrible disease, tuberculosis of the bones and glands, which has generally been considered incurable. Those afflicted are doomed to a life of suffering and uselessness. Having learned of the value of outdoor fresh-air treatment for such cases in other countries, they decided to test it at "Sea-Breeze." Hospitals sent patients, tents were erected, and nurses procured, and the experiment was satisfactorily tried. They depended alone on the pure, fresh, salt air and good food, no medicine whatever being used.

The transformation was magical; the pale, wizen-faced cripples lived on the sand, basked in the sunshine, bathed in the salt water of the Atlantic by day, and slept in the open air at night all summer long—and when the autumn days came, they were rosy and plump and able to frolic like the beings they were intended to be. When the cold winds of winter blew, they were hooded and mittened and kept in the open air. No child was allowed a bed in the house in the day time; those not able to sit up were placed in cots on the balconies of the Home, and at night every window of the wards was down half way, and the invalids were protected from the cold by ample covering. This happened two years ago. At the end of the first year, four out of the forty-three were sent home sound and well, only one made no improvement, and all the others were improving and promised an ultimate recovery. It is no wonder that they became fond of the place and were loath to leave. One little boy, who was told that now he was well he must go home and make room for another sick child, said: "I would like to go home and see them all and stay a week or two and then come back, but if I must go I'll never forget what 'Sea-Breeze' has done for me. An' when I grow up to be a man and make lots of money, then I'll see what I can do."

A little more than a year ago, Miss Laura Winnington, who was suffering from an incurable disease, visited "Sea-Breeze" and wrote an account of it, making an appeal for means to build a seaside hospital where more of these afflicted ones in New York City might be restored to health. John D. Rockefeller was the first to respond, proposing to give half the amount needed if the rest were raised by a certain time. Untiring efforts were made, but when the last hour of the time limit came, there lacked $22,000 of the amount. Before the hour had ticked itself into eternity, the telephone bell rang and a voice announced, "Build your hospital; what you have not got I will give you." The name of the donor will be kept secret by request. Jacob Riis says about it: "The name of that man will not appear in their reports, not while he lives. He wants it so. They never heard of it before; I never did. We know why now. The angels that ever behold our Father's face have heard of it often and it is enough." The hospital will now be built and that means a great decrease in the suffering of helpless children. Laura Winnington was not spared to see her prayer answered, but before she died she learned that as a result of her letter $25,000 had been given.

Summer Desserts.

Cream Pineapple.—Shred one large pineapple into small pieces. A can of pineapple can be used instead of the fresh fruit if desired. Put over it just enough boiling water to cover it and let it stew until tender. (The canned fruit only requires to be heated.) Dissolve half an ounce of gelatine in a little cold water, strain and add to the pineapple. Remove from the stove and when it is nearly cool stir in the beaten whites of three eggs and half a pint of rich cream. Pour into a mould and set it in the refrigerator to harden.

Coffee Mousse.—Take one-half of a cupful of very strong black coffee, one quart of very thick cream and one-half of a cupful of powdered sugar. With an egg-beater whip the cream, skimming off the froth as it rises and putting on a sieve to drain; continue to whip as long as the froth will rise. Mix with the coffee and sugar, put in the freezer and let stand three hours. Don't turn the freezer.

Pineapple Cobbler.—Four slices of pineapple cut in dice, one lemon and one orange sliced very thin, eight tablespoonfuls of sugar, one pint of iced water and one cup of shaved ice. Place the fruit in a bowl, strew with the sugar and a little ice, and in ten minutes add the iced water. Stir well and pour into glasses half full of shaved ice; decorate with ripe berries.

Peach Shortcake.—To two cups of flour add four teaspoonfuls of baking powder, one-half spoonful of salt, one-quarter cup of butter and one tablespoonful of sugar. Mix with milk and spread on two round buttered pans. When done, remove and butter under crust well, spread with peaches, pared and cut into sections, sprinkle well with sugar, and put over the upper crust buttered. Cover the top with peaches and arrange pieces around the outside edge. Cover with whipped cream.—Good Housekeeping.

Orange Marmalade.—Cut twenty-four oranges in bits with the peeling on, add enough water to make the whole three quarts, and leave all night. In the morning simmer till the peel is soft, add three pounds of sugar and boil till the orange is clear.

Orange Shortcake.—Make a sugar syrup, add orange juice and oranges cut in small pieces. When the oranges are heated through, split the biscuits, spread with some of the sauce, replace the other half, pour over the remainder of the sauce, or serve separately as preferred.

Banana Dessert.—Slice half a dozen ripe bananas and three tart oranges, arranging a layer of bananas and then a layer of oranges in a glass dish; sprinkle each layer of fruit with powdered sugar, and then spread over the top a thick layer of sweetened whipped cream which has been faintly tinged with a few drops of strawberry extract. Have fruit and cream very cold and serve as soon after preparing as possible, passing with it fingers of sponge cake or macaroons.

Instead of being in business for your health, you ought to be in health for your business.

The Young Folks

The Best There Is.

Do I gain all I may out of life,
The most that I may and the best?
Do I strive in the noblest strife,
And seek in the holiest quest?

Are my eyes inclined to the sod,
Or aloft to the sunlit sky?
On the low valley road do I plod,
Or tread on the hill-tops high?

Do my eyes in slothfulness sleep,
Or wakefully seek the best view?
Like a snail do I sluggishly creep,
Or soar like a bird to the blue?

O my soul, to the best bravely bend!
The prize is not for the drone;
Strive onward and upward; ascend
To claim and come into thine own.

—J. E. Everett, Fort County.

Autobiography of an Indian Chief.

ALMIRA GRAHAM, ULYSSES, NEB.

Since I am getting quite old, I thought I would write my autobiography, as is the custom among my white brothers.

I was born in a wigwam near the shore of a little lake. The wigwam was made of buffalo-skins fastened to poles. We have our few treasures stored away in these tents, while most of the time we sleep out of doors. And this is the kind of a wigwam in which Mother Nature first received me. I was strapped on a board, as all Indian babies are. This board was placed outside the tent door most of the time in fine weather. As I passed from infancy into childhood, I was taken off of this board and soon learned to walk. As I grew older, my father taught me to manage a canoe. After I received enough instruction in this, my uncle gave me a little birch-bark canoe for my own. My brothers and I spent many happy hours paddling about the lake. My uncle taught me to fish, and at this task I made a great success. Many times I caught fish two feet long. I was taught to use a bow and arrow, and killing deer was much to my liking. I rode ponies, and so my education progressed. It was about this time in my life that I saw my first white men. They were the queerest looking objects in the shape of men I ever saw. I was not afraid, as all we Indians hate cowards, but yet was ready to defend myself if necessary.

It was one morning while I was out hunting deer with my father and his companions. As we were crouched down waiting for a deer to appear we heard a rustle in the bushes, and as we looked around we saw two white men, standing looking at us. We had a little skirmish with them, and then they turned and fled. We afterward heard that they had come to trade for our furs in exchange for trinkets. We were sorry then that we had frightened them away.

By this time I was quite large, and was educated in all the sports. In the spring a great war broke out between the neighboring tribe and ourselves, and so I was called out to help. This pleased my fancy very much, as all Indians are ready to fight, or, as the Englishmen say, are bloodthirsty.

It was a beautiful morning that we started on our expedition. I had some trouble in getting my war-paint on, as it was the first time I had ever had occasion to use any, and of course had to put it on by myself. But we were finally ready to start. We soon met our enemies, and a fierce battle took place. I can see those redskins now, as they crept along and dodging from tree to tree, fired arrows at us. But we were matches for them, and as the battle raged we began to gain.

Whiz! Whiz! the arrows flew back and forth. And in the midst of it, one hit me in the hand. Oh! the pain it caused me. But I went on, and we won many battles before the war was ended, and the scalps I took numbered many. My belt was heavy with them, and when we reached home we held a great pow-wow to see which had the most scalps. This pow-wow was held right after our return. Grey Eagle, who was our former chief, had been killed, and so the Indian who had taken the most scalps was to be the new chief. This honor happened to be mine. We danced our war-dances, and the medicine-men did their part well, after which we had a great feast that was served by the squaws.

During this time the white men had been settling on our lands without asking our permission. This was an insult to us, so I sent a message to them by Big Bear, asking for the reason this advantage had been taken. They sent me word that they would

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Cause, Smothered by Dandelions

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CHAS. E. MOHR,
Glendale Park, Hutchinson, Kans.

send me the pestilence, if I made war, so I kept quiet about it.

Afterwards I saw a squaw that pleased my fancy, and so we were soon united.

About three moons later my braves were planning a trip up the lake. I concluded to go along, and so my squaw packed up the wigwam and food, while I smoked my favorite pipe.

'Twas the next morning that we started, and we were very thankful to the Great Spirit for such a beautiful day. Just as the sun was rising high o'er the tree-tops, we stepped into our canoes. The birds were singing their merry songs, and the locusts were helping the merry chorus. The water was clear and still, and the fish swam about, some of them shining like gold in the sunny brightness. The leaves rustled in the springing breeze, and the pond-lilies nodded back and forth like daisies in the fields. As we paddled up the lake we could see the wildcats peeping out from among the friendly branches. After about a day's travel we reached the place where we were going to camp. While my braves and I caught some fish, the squaws put up the wigwams and gathered wood for the fire.

The next morning we went up the lake a little farther to the accustomed hunting ground. We were crouching to the ground when all at once a large and beautiful deer appeared from the edge of the forest. We shot but only wounded him. He became crazed and tried to fight us. We shot twice more, but this only made him the more angry. When he saw where we were, he started directly toward us, and tried to stamp us to death, but finally one of my braves hit him and he instantly fell dead. The squaws took him to the camp while we went fishing. We caught several large fish, and then returned to the wigwam, where we smoked the remainder of the evening. We stayed two days and then returned home again.

The next year two white men came to our neighborhood and stayed a few weeks. They told us of the Great Spirit whom they called God, and the happy hunting ground which they called heaven. They taught us to speak French and English, so after that time I was able to talk with a Frenchman or an Englishman.

The English became very good to us about this time, and I grew suspicious, thinking they wanted more land, but I suppose they didn't, as they never spoke of it. When I was 50 years old, a white friend gave me a new red blanket, and I was indeed very proud of it. My youngest son was now about 6 years old, and I began training him in the arts and crafts known to the Indians. He was very intelligent, and I made him a present of a little birch-bark canoe, like the one my uncle had given me when I was about the same age.

The Englishmen taught us to build huts or houses, and so my squaw is now building one with some assistance.

Now I am a happy old Indian with three sons. I spend my time smoking and telling the young Indian braves of the daring things our tribe has done, while I wait for my summons from the Great Spirit to go and join my brothers in the happy hunting ground.

Each to His Task.

Augustus Hare, writing a reminiscent sketch of a friend of his, Mrs. Duncan Stewart, remarked that to the end of her days she was the magnet for all sorts and varieties of people Without the least effort she eclipsed her juniors, partly because she was always thinking of others, and partly because she was absorbingly interested in the present moment.

This lady possessed in a very remarkable degree the fine art of telling a story. She was once the guest of the King of Hanover, who was blind. The blind king delighted in her conversation, and she saved up every interesting story she heard to tell him. One day they were taking a drive together. Suddenly the horses started and the carriage seemed about to upset. "Why do you not go on with your story?" said the king "Because, sir, the carriage is just going to upset." "That is the coachman's affair," said the king. "You go on with your story."—Margaret E. Sangster, in Woman's 'Home Companion.

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The Little Ones

White Whisker's Lesson.

Once there lived a little mouse with a long and silky tail,
Oh! a very, very long tail indeed,
And the fact was very plain that this little mouse was vain,
As his mother and his brothers all agreed.

Oft his loving mother said, "Dear White Whisker, I'm afraid
Something sorrowful will happen to my son—
If his pride he does not cure—something dreadful I am sure,
To that beautiful long tail will be done."

Well, one bright sunshiny day, when White Whisker was at play,
Something heavy came down hard on his tail;
Then he felt the piercing claw of a cruel cat's big paw,
And poor mousie gave a sharp and sudden wail.

Well, 'tis really strange to say, little mousie got away,
But his tail for many days was very sore,
Then the end quite fell away, but I'm very glad to say,
That White Whisker was not vain any more.

—Mrs. Frank A. Breck.

Great-Aunt Maria's Cure.

"I just detest the in-between time!" grumbled Mabel Scott. "I mean the between time of age. I don't appear well before the people, and if I play with the children, every one calls me a tomboy, and there just doesn't seem to be any place for girls of 14, especially if they have too many elbows and feet."

"That's so," said grandmother. "I felt just that way myself until I discovered the cure for awkwardness."

"Is there one?" asked Mabel delightedly, taking a seat at grandmother's feet. "Because I grow so fast that I don't have time to get used to myself, grandmother dear. I overheard uncle say, only yesterday, 'Mabel was a dear little girl, and will be a fine woman, but she ought to keep in retirement for two or three years,'" and Mabel's blue eyes filled with tears.

"I was tall for my age, too," said grandmother's comforting voice; "never could enter a room without stumbling over a chair or kicking up a rug, and grew so self-conscious that I was miserable most of the time."

"You, grandmother?" said Mabel, looking in astonishment at the stately old gentlewoman.

"Yes, I; and the way I was cured was this: I had been to a party one night, and had appeared so poorly that, on reaching home, I threw myself on my bed and cried with vexation.

"Great-Aunt Mary was visiting us at that time, and her room being next to mine, she heard my sobs, and soon a sharp tap sounded at the door, and in she came, wearing a broad-frilled night-cap, and carrying a candle, bottle, and spoon.

"'Are you sick?' she asked; 'because, if you are, here is an herb to drink.'

"'No,' I sobbed out.

"'Have you hurt any one's feelings, or has anybody done harm to you?' she next inquired, in her brusque yet kindly way.

"'No; oh, no,' I said; 'but I was so awkward, and appeared so, and couldn't think of remarks to make—

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and—nobody ever—makes—such a fool—of themselves as I do!'

"'Oh,' said Great-Aunt Mary, 'is that all? Now the next place you go to, try to see how many people you can make have a good time, and bring me word. And now go to sleep, or you will look like a fright to-morrow.'

"The next week there was a gathering at one of the neighbors' who had a niece from the city visiting her. While I was nervously in dread about going, my great-aunt came to me and said:

"'That lame Dodd boy will do to begin on, and I shall expect quite a list, remember!'

"Well, that was the first party I really enjoyed. In looking out for the Dodd boy, I forgot my feet, and they got into the room very well; for I've noticed that both hands and feet get along nicely when you leave them alone.

"I helped Jimmie Dodd in the games, and repeated the conundrums to the deaf old grandmother, who stayed up part of the evening to enjoy the fun.

"I offered to tie on the handkerchief in the blindfold games, and so put my awkward hands to work, and—well, in thinking of others, I forgot myself, and had a happy evening, and when I told my great-aunt about it, all she said was:

"'Huh! Supposed you would.'"

"Thank you, grandmother," said Mabel. "I will not forget, or, at least, I will forget my hands and feet."—Morning Star.

Club Department

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Our Club Roll.

Excelsior Club, Potwin, Kansas. (1902)
Women's Literary Club, Osborne, Osborne County (1902).
Women's Club, Logan, Phillips County (1902).
Domestic Science Club, Osage, Osage County (1888).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).
Chalitso Club, Highland Park, Shawnee County 1902).
Cultus Club, Phillipsburg, Phillips County (1902).
Literateur Club, Ford, Ford County (1903).
Sabean Club, Mission Center, Shawnee County Route 2 (1899).
Star Valley Women's Club, Iola, Allen County (1902).
West Side Forestry Club, Topeka, Shawnee County, Route 8 (1903).
Fortnight Club, Grant Township, Reno County, (1903).
Progressive Society, Rosalia, Butler County (1903)
Pleasant Hour Club, Wakarusa Township, Douglas County (1899).
The Lady Farmer's Institute, Marysville, Marshall County (1902).
Women's Country Clue, Anthony, Harper County.
Taka Embroidery Club, Madison, Greenwood County (1902).
Prentis Reading Club, Cawker City, Mitchell County (1903).
Cosmos Club, Russel, Kans.
The Sunflower Club, Perry, Jefferson County (1905).
Chaldean Club, Sterling, Rice County (1904).
Jewell Reading Club, Osage County.
The Mutual Helpers, Madison, Kans. (1906).
West Side Study Club, Delphos (1906).
Domestic Science Club, Berryton, Shawnee County (1906).
Mutual Improvement Club, Vermilion, Marshall County (1903).
(All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.)

The Woman With a Broom.

So much has been said about the club alienating the woman from her home that I quote the following statement which comes from the Household Economic Committee, of the Iowa State Federation:

"While not wishing to be in the least degree pessimistic, we want to sound a note of warning, that we may pause in our onward rush and take a look backward. In our eagerness to emancipate woman, we have swung the pendulum too violently and its rebound is proving destructive to primitive household idols. We are slowly but surely disgracing this family altar, delegating its priestly offices to barbarian hands. In other words, we have degraded kitchen work and placed a social ban upon all women who dare to take it up as a means of livelihood. No thinking woman will deny these plain, cold facts, or that in them lies great danger to our homes. The remedy lies in our own hands. Will we be frank enough to use it, or will we, through fear of Mrs. Grundy, bury the talent entrusted to our care, instead of investing it where it will gain a noble increase which we can return to the Master when he calls for an accounting? Artist and poet have immortalized the man with a hoe. We seek to place a like halo above the head of the woman with the broom."

The Purpose of Clubs.

The following, which speaks so plainly the purpose and intent of clubs, is an extract from the report of Mrs. D. S. Stevens, given at the State Federation of Woman's Clubs, held at Lawrence last May:

"This is the day of our opportunity, and it must find us prepared. Our purposes should not be selfish. We should seek channels of expression which will make our lives full, useful, and kind. To have a beautiful and safe structure, we see to it that the foundation-work is firm and strong. So in club life, we are living for another generation. We are paving the way for a higher standard of living. We seek to protect the child from unlawful labor; we try to preserve a healthy body, by investigation of food adulterations; and we want to cut away and beautify the ugly places in our cities and towns, and altogether make this country a better place in which to live. There is so much we would like to do, I am quite sure I have not time to tell it all, or live to see it accomplished.

"It was Emerson, who, in answer to the question, 'What is civilization?' answered, 'The power of a good woman.' The world is in our hands; so, let us work, not for ourselves, but for others."

The Good We May Do for the Erring Ones.

READ BEFORE THE SHAWNE COUNTY HORTICULTURAL SOCIETY, BY MRS. JOHN G. OTIS.

The subject assigned me suggests two questions, the first, "Am I my brother's keeper" that I should assume any extra cares or more duties in order that I may do some good to an erring one?

The second question that arises is, "Who are the erring ones?" In other words, are the inmates of our prisons, jails, and reform schools the only ones to be assigned to this class?

The people, the sovereign power of a republic, demand laws and the enforcement of them, that touch the life and liberty of the murderer, the thief, and those who have committed other misdemeanors, and the culprit realizes that he is being kept and cared for by humanity through man-made laws and by public officials.

AN OUNCE OF PREVENTION.

Visits to the Boys' Refrom School, a day spent at the Industrial School for Girls, a visit at our county jail, and the thoughts of the inmates of our State prison, have led me to ask if it is possible that the money spent to maintain reformatories could be used in any manner to lessen the need of them, and has called to mind the old adage that "an ounce of prevention is worth a pound of cure," a ratio of 16 to 1 in favor of every means to prevent crime. To err is human, and as we are all human, may we not truthfully say that all humanity are erring ones?

THE NEED OF HIGH IDEALS.

The errors of one individual may or may not be the errors of another. We find some so self-possessed, whose thoughts, feelings, and every word and action are so completely under control of his higher nature and better judgment that the errors of that person are scarcely discernible. The development of a higher manhood and womanhood is what we want. We need higher ideals for individuals, for the community, the State, and Nation; a public sentiment that recognizes that character-building is the greatest object of this life, in comparison with which the acquisition of wealth or fame is the merest child's play.

The acquiring of social and political positions are at longest for only a few short years, but our characters are for time and eternity, and are all that we can take with us when we pass to the future life.

We find in the physical life that the muscles and sinews of individuals are strengthened by use; that well-directed exercise develops the physically weak. We have also seen sorrow, adversity, and suffering met bravely, and characters strengthened and purified. So in character-building are not the various experiences of life for the strengthening of the higher nature of the individual? If we live up to and are controlled by our higher natures, can we not rise above very many of the little perplexities of every-day life?

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possible training of the youthful minds is not only the concern of the parents, but of the community. Statistics shows that a smaller per cent of the pupils of the kindergarten schools become criminals than from the same number of children who have never attended such schools.

Surely this is a plea for an increase and enlargement of our kindergarten schools, a case of kindergarten versus reform schools. Our public school system provides for a compulsory intellectual training of the children, and slowly but surely are the manual training schools becoming a part of our educational system. The farmer boys and girls, during their vacation, become helpers in the home and on the farm, but very many of those of the city are either confined to the small lot about the home or permitted to become, to a greater or less degree, street-gamins. Is it any wonder that our reform schools are full?

It is a question of vital importance to all cities and the States in which they are located that the youth during the summer vacation spend a portion of their time each day in some interesting industrial employment.

IMPORTANCE OF INDUSTRIAL EDUCATION.

Domestic economy of a few years ago has become a science, and through evolution is now ranking high as an art, and so it is with other industrials. A scientific knowledge of any branch of our industrial system increases one's love and enthusiasm for that line of work.

When the pupils leave the confinement of the school-room for the summer vacation, it is not a continued idle rest that they need, neither should they take any lessons in becoming idlers and loafers on the streets. During the regular school year, the time for instruction along industrial lines is limited, but a portion of each day during the summer vacation could be spent very profitably in gaining an industrial education.

Industrial education makes skilled workmen of all. No one questions today the advantages that come to a skillful workman.

Instruction on the breeding and care of animals will teach the value of them to mankind and make less need of organizations for the prevention of cruelty to them. The gathering of geological specimens, also those of plant-life and of insects, can be made the occasion of several very enjoyable summer picnics and will be a preparation for the study of geology, entomology, and botany. I contend that a nation can not reach the ideal until its citizens are industrially educated. The effect of a reasonable amount of labor is ennobling.

A PLEA FOR EDUCATED MOTHERHOOD.

The errors of our lives are affected by our surroundings. If the statement be true that our education begins one hundred years before our birth, we are now suffering from the errors of previous generations. Some of our grandparents honestly thought that girls needed no education. This error gave us uneducated motherhood and retarded the evolution of the human family, but the denying to woman equal educational opportunities rallied the mentally strong women of nearly a century ago to organize and demand the same rights that our revolutionary sires did when they protested against the tyranny of taxation without representation.

We now have four States in the Union that have progressed beyond the error of making the motherhood of those States the political peers of the idiots, insane, and criminals.

To-day, the larger per cent. of the graduates of our schools are girls. This may be construed as a proof that our grandfathers were in error in holding their opinions, and we sincerely hope that the men of progressive Kansas were at least sincere in their opinion of their mothers, wives, and daughters when they defeated the equal suffrage amendments at the polls. All of this proves that what seems to be right to one may be an error to another.

It is the opinion of some who have seen long service in moral reform work that the larger per cent of the inmates of our reformatories are classed as erring ones because of unhappy marriages, unwilling motherhood, and unpleasant homes, and the absence or the non-enforcement of a curfew law. So far as my experience lies in this direction, I heartily endorse the opinion and am more radical on the curfew ordinance, believing that there is a time when all honest persons should be in bed and that every one should be subject to arrest during that time who has not a special permit to be on the streets for some unavoidable reason.

PARENTS THE ERRING ONES.

If the above opinion is correct, surely we must see that the parents are really the erring ones and reaping what they have sown. Higher ideals with a greater ability to know ourselves would be our remedy.

The ability to control our thoughts, feelings, and actions by our higher natures is a greater victory than vas ever won by contending armies, and gives one almost unlimited influence over others for good.

"The good we may do the erring" is to build up our own characters, and recognize that it is character, not wealth, that makes the individual. Lend a helping hand whenever an opportunity opens. A little help to those who have stumbled in life's pathway will often come at the critical time of their lives, the deciding point of whether they live lives of crime and shame or become noble citizens. The thoughts that I especially desire to send with you to your homes are the great importance of building ideal characters and that the filling to overflowing the lives of others with the good is the concern of the community in which we live. An ideal character is so full of good that there is but little room for errors.

The Broadening Effects of Club Work.

There is such a great and splendid field for club work that the earnest, noble, unselfish woman can find her part of it. She soon gets beyond self-seeking. She ceases to care if her name is left off the list of after-dinner speakers or the club programme. She doesn't care if she does not stand at the head of committees. She is willing to do her small share of work without any resultant glory. One of our noted men says that a committee should always consist of three members, one of whom is ill, one out of town, and one to do the work. A well-known club woman who is famous for her accomplishments always refuses to be on a large committee, saying, "If you make a committee of one, I will go on it; but I can do nothing with others, who are always late, always unwilling to accept my methods, always frittering away hours of my time with committee meetings that do nothing and get nowhere." This sounds at first a little selfish, but, after all, is she not right? The woman who works alone for a committee knows what she wants to do and does it without wasting hours in fruitless discussion.

Experience in club work is broadening woman's mental vision every year; only she needs to be careful and not let the excitement of it run away with her judgment, or the affiliation of it blind her eyes to the fact that there is nothing in this world better than the home ties.—Helen Winslow, in Delineator.

A Good Prayer for Club Women.

"Keep us, O God, from pettiness; let us be large in thought, in words, in deed.

"Let us be done with fault-finding and leave off self-seeking.

"May we put away all pretense and meet each other face to face—without self-pity and without prejudice.

"May we be never hasty in judgment and always generous.

"Let us take time for all things; make us to grow calm, serene, gentle.

"Teach us to put into action our better impulses, straightforward and unafraid.

"Grant that we may realize it is the little things that create differences; that in the big things of life we are as one.

"And may we strive to touch and to know the great, common woman's heart of us all, and, O Lord, let us forget not to be kind."

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Miscellany

At the Largest Experiment Farm in the World.

A new State building, its likeness being presented to our readers in this issue of the KANSAS FARMER, is the new elevator and seed house of the Fort Hays' Branch Experiment Station, in Ellis County. The Legislature at its last session appropriated $1,500 for the construction of this edifice and, completed, it fills a most needful and practical use at the experimental farm.

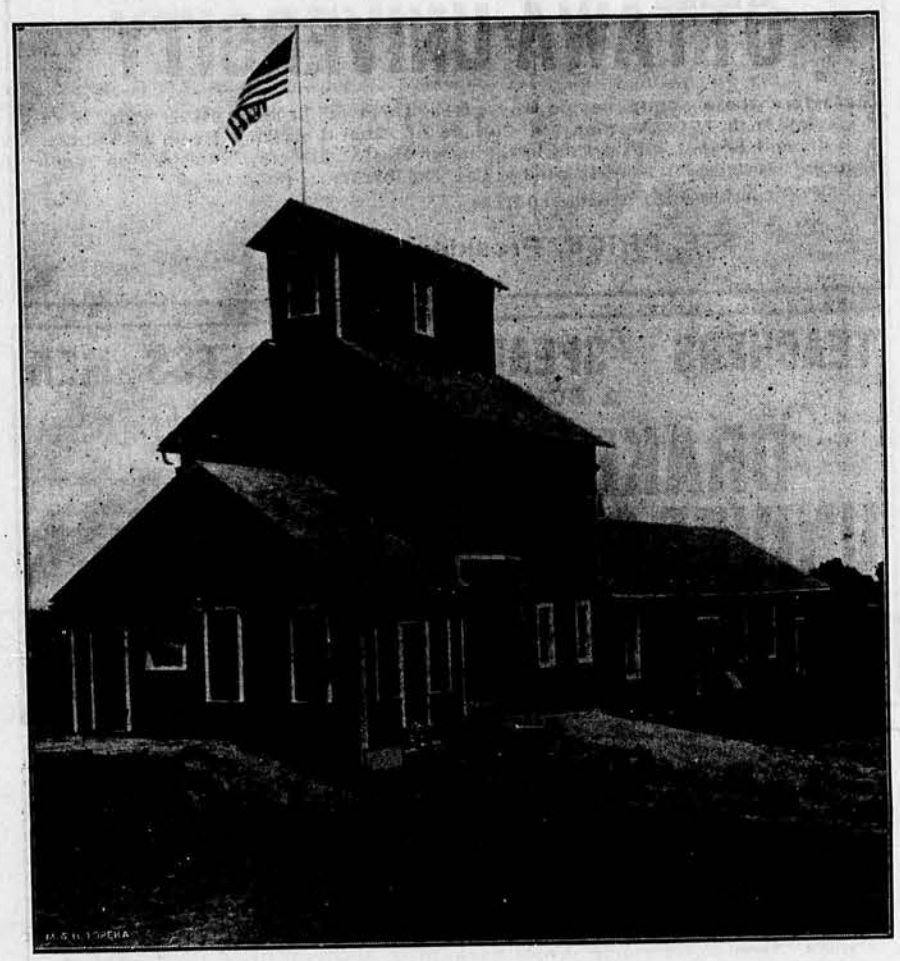
The building was finished in the early spring of this year. Concrete foundations and cement-bottomed grain-pits, upon which was erected the well built structure, gave the station a building that, while not costly, is well planned and has already proved its practical value to the working force of the farm. It has a capacity of about 6000 bushels and is equipped with elevating and cleaning appliances complete. Beside the room occupied by numerous grain-bins, there is a small laboratory and a stock-room for storing grain samples. Adjoining the elevator is a small office-room containing scales and equipment for handling the many varieties of grain this experiment station is working with. It is work that requires no small storage accommodations, so the new building with over 300 separate bins, ranging in size from 1000 bushels capacity to 1 peck, is an investment from which much practical use is obtained.

There are two bins having a storage capacity of 1000 bushels each, five with 500 bushels capacity each, nine with 100 bushels capacity each, sixteen of 20 bushels each, and the remainder are of a size to accommodate 2 bushels, 1 bushel, or 1 peck each. These bins all have hoppered bottoms, and are so planned that the filling and emptying of all of 20-bushel capacity or over is done by machinery.

A Eureka cleaner is installed for fanning and grading grain; a wagon-dump, loading-chute, and a four-ton scale are part of the equipment, while a gasoline-engine supplies power to operate the elevating, storing, and cleaning appliances.

The structure was arranged so that additional bin capacity could be added as required, and this fact will soon need consideration, as the station is increasing its area of cultivated land; now operating almost 1400 acres besides the leases it controls.

The other building pictured is the large horse barn of the Fort Hays Branch Station that was struck by lightning and burned June 22. With it some 50 tons of hay and various harness and tools were destroyed, but the horses, mules, and cows were rescued before the fire gained headway. The loss of this barn is a serious inconvenience in the work at the station, as there are no other structures available to accommodate the twelve work-teams, dairy-cows, harness, stock, etc. excepting the small open cattle-sheds. These were temporarily arranged with stall-partitions and feed-mangers, but are unfitted for the winter housing of horses. The need of a model barn, at this growing state institution, sufficiently large to fill all requirements for a number of years to come, is very apparent; and it is hoped the State will come to the aid of her 4000-acre experimental farm in the "short-grass."



Elevator and Farm Office Fort Hays Branch Kansas Experiment Station.

The Kansas State Exposition.

The Kansas State Exposition will be especially strong in the speed ring this year. There are now more entries in the various speed events than ever before and more, it is believed, than was ever made in any ring in Kansas. Horses of National reputation will be present and the week will be a carnival for those interested in the "Sport of Kings."

At great expense the management has secured the famous trotting ostrich which will go in harness to a four-wheeled cart against any horse and against time.

This year the management has thrown open the grounds for the exhibit of agricultural and other machinery free of charge. Free space on the grounds will be given to any exhibitor who writes for the same to the secretary. Space inside the buildings can not be furnished. Address Secretary R. T. Kreipe, Topeka, Kans., for list of speed events and other information.

Any of our readers who have old feathers in beds, pillows, etc., can find a ready sale for the same by writing to McEntire Bros., manufacturers, Topeka, Kans., who will gladly give detailed information as to how you can easily and safely dispose of your supply of old feathers.

James Leffel & Co., Springfield, Ohio, have issued a very handsome and complete new 52-page catalogue, illustrating and describing their line of steam-engines and boilers. The details of construction are plainly shown and fully explained, and the catalogue is one that should be in the hands of any prospective purchaser of work in the steam-power line. A copy will be furnished free to prospective buyers, stating their wants and addressing the company as above. In writing for this catalogue please request Catalogue "O."

Caustic Balsam Cures Lump Jaw.

The Lawrence-Williams Co., Cleveland, O.:—Among the many ailments which may be cured by Gombault's Caustic Balsam should be included lump jaw in cattle. One application will cure it. It is the best liniment I have ever seen or used and I would like to see it in the hands of every dairyman.—DANIEL DUPERTUIS, Curtis, Wash., July 24, 1906.

The Grange

"For the good of our Order, our Country and Mankind."

Conducted by George Black, Olathe, Secretary Kansas State Grange, to whom all correspondence for this department should be addressed.

News from Kansas Granges is especially solicited.

NATIONAL GRANGE.

Master.....N. J. Bachelder, Concord, N. H.
Lecturer.....Geo. W. F. Gaunt, Mullica Hill, N. J.
Secretary ...C. M. Freeman, Tippecanoe City, Ohio

KANSAS STATE GRANGE.

Master.....E. W. Westgate, Manhattan
Overseer..... ..... A. P. Reardon, McLouth
Lecturer.....Ole Hibner, Olathe
Stewart.....R. C. Post, Spring Hill
Assistant Stewart.....Frank Wiswell Ochiltree
Chaplain.....Mrs. M. J. Ramage, Arkansas City
Treasurer.....Wm. Henry, Olathe
Secretary.....George Black, Olathe
Gatekeeper..... ..... J. H. Smith, Lone Elm
Ceres.....Mrs. M. L. Allison, Lyndon
Pomona.....Mrs. S. M. Phinney, McLouth
Flora.....Mrs. S. J. Lovett, Larned
L. A. S..... Mrs. Lola Radcliffe, Overbrook

EXECUTIVE COMMITTEE.

O. F. Whitney, Chairman.....Topeka, Station A
E. W. Westgate .....Manhattan
George Black, Secretary... .....Olathe
Henry Rhoades..... ..... Gardner
J. C. Lovett..... ..... Bucyrus

STATE ORGANIZER.

W. B. Obryhim.....Overbrook

Grange Field Meetings in Kansas.

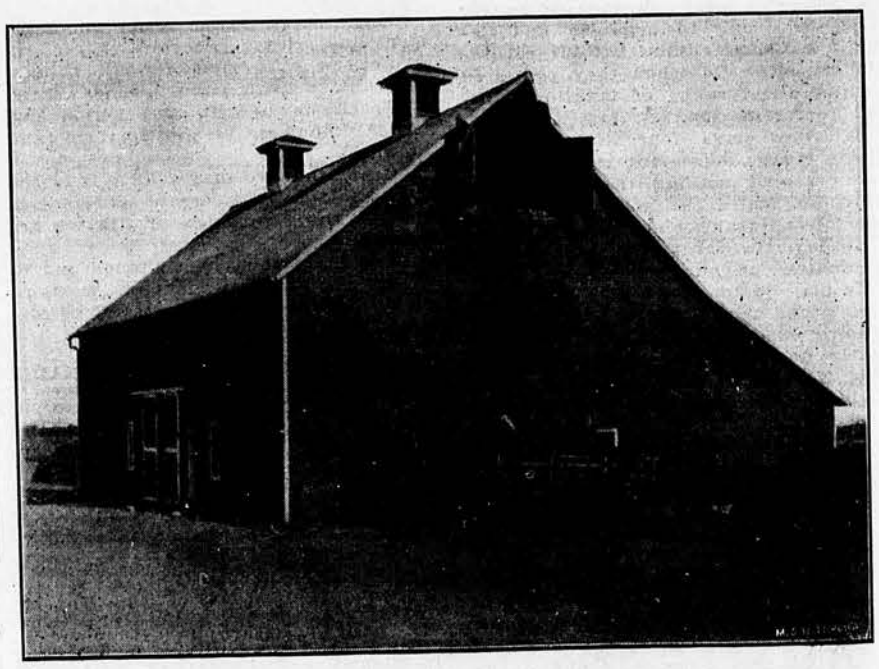
In accordance with the request of several localities in Kansas, where the Grange holds an annual field meeting or anniversary celebration, the executive committee arranged for the services of Hon. Mortimer Whitehead, of New Jersey, a practical farmer, past master of the New Jersey State Grange, and past lecturer of the National Grange, commonly known as the "silver-tongued orator of the Grange," a title earned by thirty-five years service in the Grange lecture field, and mapped out a series of meetings from July 16 to July 27, inclusive. The committee also arranged that I should accompany him in this lecture tour in Kansas.

The first meeting was held at Vinland, Douglas County, on Monday, July 16. The meeting was held in Vinland Grange Hall which was filled to its utmost capacity. There were no arrangements made for an elaborate meeting with an extensive program. The members of Vinland Grange and their friends came out to hear Mortimer Whitehead. They gave him their undivided attention to the convincing arguments he so fairly and honestly presented. After the meeting the old members of Vinland, who have worked constantly in the harness and grown grey in the service of the order, expressed their delight and pleasure with the effort of Brother Whitehead and are satisfied that it will result in much good in that locality.

At the close of the meeting we were surprised and delighted to find Brother and Sister Jacob Badsky in waiting for us with their carriage to drive twenty-five miles across the country to Overbrook, where our next meeting was to be held July 17. They took us to their elegant country home, near Overbrook, where we enjoyed their hospitality for the night, and were taken by Brother and Sister Heberling next day to the picnic ground north of Overbrook. This meeting is an anniversary of the organization of Hurricane Grange No. 359, and has been so observed for over thirty years. Every year thousands of grangers and farmers in Osage County come together, renew their fealty to the cause, and increase their numbers.

This meeting was no exception to the rule, and Brother Whitehead delivered an able address on the Grange, its objects and purposes, in a manner which proved very acceptable, if we may judge from the favorable expressions made in our hearing.

The next meeting was held near Meriden, in Shawnee County, in Seal's beautiful grove, under the auspices of Shawnee County Pomona Grange. When the time arrived for the meeting, there was a large gathering of people, not only from the members of the Grange, but many farmers and their families



Barn, Fort Hays Branch Kansas Experiment Station.

ITS MERIT IS PROVED

RECORD OF A GREAT MEDICINE

A Prominent Cincinnati Woman Tells How Lydia E. Pinkham's Vegetable Compound Completely Cured Her.

The great good Lydia E. Pinkham's Vegetable Compound is doing among the women of America is attracting the attention of many of our leading scientists, and thinking people generally.

The following letter is only one of many thousands which are on file in the Pinkham office, and go to prove beyond question that Lydia E. Pinkham's Vegetable Compound must be a remedy of great merit, otherwise it could not produce such marvelous results among sick and ailing women.

Dear Mrs. Pinkham:—

"About nine months ago I was a great sufferer with female trouble, which caused me severe pain, extreme nervousness and frequent headaches, from which the doctor failed to relieve me. I tried Lydia E. Pinkham's Vegetable Compound, and within a short time felt better, and after taking five bottles of it I was entirely cured. I therefore heartily recommend your Compound as a splendid female tonic. It makes the monthly periods regular and without pain; and what a blessing it is to find such a remedy after so many doctors fail to help you. I am pleased to recommend it to all suffering women."—Mrs. Sara Wilson, 31 East 3d Street, Cincinnati, Ohio.

If you have suppressed or painful periods, weakness of the stomach, indigestion, bloating, pelvic catarrh, nervous prostration, dizziness, faintness, "don't-care" and "want-to-be-left-alone" feeling, excitability, backache or the blues, these are sure indications of female weakness, or some derangement of the organs. In such cases there is one tried and true remedy—Lydia E. Pinkham's Vegetable Compound.

outside the order, and many citizens from the town of Meriden were present and were evidently gladly welcomed. Bro. H. H. Wallace, master of the Shawnee County Pomona Grange, presided, and after calling the meeting to order, Brother Whitehead was introduced and delivered an able address, demonstrating to the people the need of organization and cooperation for the building up of agriculture and the elevation of the farmer and that the Grange met all the requirements demanded.

The next meeting was held at Oak Grange, Shawnee County, July 19. On account of threatening weather, the meeting was held in the hall, which was filled to its utmost capacity with members of the order, whose intelligence and capacity have been brought to the front in grange circles many times? Among the number were Brother and Sister Wm. Sims. How often have we not only listened to but acted on their able counsel as they gave it in the Kansas State Grange in the years gone by. How glad we were to have the privilege of meeting them and taking them by the hand once more.

Brother Whitehead made his usual brilliant and convincing effort, which was enthusiastically approved by all. After the speaking and dinner were over, Brother Whitehead gave a lecture on the unwritten work and symbolism of the Grange.

From Oak Grange, in Shawnee County, we went to Edgerton, in Johnson County, where we found the large hall of Edgerton Grange filled, eager to hear the silver-tongued Grange orator from New Jersey, who held his audience in the closest attention until six minutes of train time. His lecture was declared by many to be the ablest lecture ever delivered in that county.

From Edgerton we boarded the train for Cadmus, in Linn County. This meeting is one of the Grange anniversaries that has been held annually on July 21 for over thirty years.

The meeting was held in the grove, where thousands were gathered to celebrate the anniversary of the organization of Cadmus Grange No. 350. The program for this meeting was an elaborate one, of which I am sorry I failed to keep a record. Brother Whitehead's lecture to the farmers at this place was like a summer shower, refreshing and full of that which builds up and makes things grow.

At this point the members of the order have a large cooperative store. They own their large two-story stone building. The lower story is occupied as store rooms and the upper story is their grange hall. This grange numbers over three hundred members and is the largest subordinate grange in the State.

In the evening a private grange meeting was held in the hall, at which time Brother Whitehead delivered a lecture importing valuable information relating to the unwritten work and symbolism in the grange, for which he has no equal, giving to those members who had the pleasure of hearing him many new and higher ideas of the teachings and principles of the order.

Our next meeting was held in Harrison's grove, near Wellsville, in Franklin County, under the auspices of Walnut Creek Grange No. 60. The meeting was convened early in the day, as quite a program had been prepared, consisting of recitations and songs by the younger members of the grange, which proved very interesting and added to the success of the meeting.

After the noon hour, Brother Whitehead was introduced and gave a very interesting address on the past, present, and future of the Grange. It was a grand presentation of the Grange and its work, and could it have been heard by the farmers of Kansas, it would have created a wonderful change in grange conditions in our commonwealth. Those who did avail themselves of the privilege of hearing this grand expose of grange principles were made stronger in the faith. It resulted in many new applications for membership, and another new grange is in process of organization.

Our next meeting was held at Madison, Greenwood County. The farmers and their families in this locality gathered in a beautiful grove, near Madison, under the auspices of Madison and Willow Valley Granges.

The address of welcome was an able one and was delivered by a young patron of Willow Valley Grange. He is a graduate of the Kansas University. He has that gift of language and manner which made the guests on this occasion feel at home. Mr. Gamis, the editor of the Farmer's Advocate, who during the life of the Farmers' Alliance so ably earned the reputation of "farming the farmers," delivered a short address in which he attempted to use the Grange as a sort of cooperative donkey to work in and bring to the front some new organization for farmers that he is interested in, and closed with a very flattering eulogy to the ladies in anticipation of the fried chicken, pie, and cake so soon to be served.

One of the nice features of this meeting and one that has existed in Madison and the surrounding country for some time is the harmony existing between the town and country. On this occasion the stores and all business houses were closed and the city people came out to swell the large gathering and listen to the grange doctrine as expounded by its able exponent, Mortimer Whitehead, and in return when the citizens of Madison desire the assistance of the country people, they close their business and come to town en masse. I would it were the case everywhere. The program at this field meeting was very good. Brother Whitehead varied his address somewhat, showing the age of the Order of Patrons of Husbandry, its high standing, and respect shown for it by the President and Congress of the United States, its power recognized by State Legislatures, what the Grange has accomplished in a legislative way in the interest of all the people, what the Grange has now in hand, and what it expects to accomplish in the near future, showing its numerical strength and its concentrated power for doing good, thus making clear the utter folly of dividing the farmers in the making of new organizations when they have one already organized and equipped, locally and nationally, and with a prestige that it takes an organization years to attain. From what I can learn, this meeting resulted in great good to the Grange as well as an increase in membership.

Our next meeting was held at Snyder's Grove, at Wakarusa, under the auspices of Carbondale Grange. A splendid program was given in which the young members of the Grange took a very active part. At 12 o'clock a great table, one hundred feet in length, was spread and heavily laden with every thing good raised upon the farm, even to a dish of "smear-case."

Brother Whitehead in the afternoon held the large audience closely for nearly two hours, in which he awakened the patriotism and the enthusiasm of every patron and farmer who heard him. The opinion of the membership is that this meeting will do a great deal of good in that locality.

Our next meeting was held at New Lancaster, Miami County, under the auspices of New Lancaster Grange. This is comparatively a new grange, yet composed of many very earnest workers.

We had an ideal day for a field meeting, and a splendid attendance to listen to the sledge-hammer blows and convincing arguments in behalf of the Grange by the able speaker, Brother Whitehead, which would surely awaken an enthusiasm that will win back old patrons and attract many others to join the Grange. Surely, the small cost to those places where these field meetings were held is but a trifle when compared with the good results obtained. The increase in the treasury by the accession of new members will greatly exceed the cost of the meetings, leaving out of consideration the general revival of interest among all the members.

Our next meeting and the last of the series of field meetings was held on Friday, July 27, at Olathe, a place, in the language of one of our eminent Kansas professors, that is three and one-half miles nearer heaven than any other point in Kansas. This fact, I presume, with the close attention of a large and enthusiastic audience made it much easier for Brother Whitehead to talk on the wonderful work accomplished by the Grange in the last quarter of a century. He certainly delivered an able address. I had him in charge during his entire itinerary in Kansas and when he reached Olathe he was about to his fighting weight.

He spoke to the people in the public square in Olathe for about two hours, and after his address was completed and he left the platform he was surrounded with enthusiastic admirers with many words of congratulation and approval. The meeting in Olathe was an anniversary, but the attendance this year was not up to the standard. There were between one and two thousand people present, when there should have been three or four thousand. The program consisted of music by the Olathe Military band and addresses delivered by the chairman, J. D. Hibner; Robert Baker, of Lenexa; Ed. Blair, manager of the cooperative store at Spring Hill; and the address of the day by Mortimer Whitehead.

In conclusion let me say, let each individual member in the localities visited work to build up the Order of Patrons of Husbandry. Take the applications for membership that I distributed, and more if need be, and solicit farmers outside the gate to become members. Solicit while the words of Brother Whitehead are fresh in their memories. If each member of the Grange succeeds in getting one applicant, that will double the membership.

Thanking you all for the courtesies extended to Brother Whitehead and myself during this tour through Kansas, and for your ready response with your contributions for expenses incurred, I am yours fraternally,

A. P. REARDON.

The Grange Covers the Whole Country.

In speaking of the growth of the Grange, the Prairie Farmer of March 10 says:

"The Grange organization is now nearly forty years old. It has had its ups and downs, but it lives and grows. It is no longer a theory, an experiment, or an untried plan. It has been weighed in the balance and not found wanting. If there had been no good in it, it never could have lasted all these years. It is the largest and best organization farmers ever had. Farmers' clubs and other local societies do good, much good, ut their influence is local and not widespread. The Grange covers the whole country. It is local, State, and National in its work. A single grange has strength, but strength united is stronger.

OLD ENTHUSIASM RETURNING.

"The Grange now has over 1,000,000 members in good standing, 60,000 new members having been added last year. It is strong in the Middle and Eastern States and has a good following in California, Oregon, and Washington. In the South it is more than holding its own at present. Active work is now being done in Wisconsin, Iowa, and Nebraska in organizing and reorganizing Granges. The old fire of the early days in States that were first in getting laws controlling railroad rates is again brightening, and the farmers of the Mississippi Valley are sustaining President Roosevelt in his square deal on Grange lines."

DON'T BUY GASOLINE ENGINES UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline, kerosene or alcohol engine, superior to any one-cylinder engine; revolutionizing power. Its weight and bulk are half that of single cylinder engines, with greater durability. Costs Less to Buy—Less to Run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or traction engine. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mfrs., Meagher and 15th Sts., Chicago. THIS IS OUR FIFTY-THIRD YEAR.

WILL YOU LET US PLACE A TOLMAN RANGE IN YOUR HOME ON ONE YEAR FREE TRIAL?

We want to prove to you, at **our risk**, in **your own** home, without any obligation on your part whatever, that Tolman Ranges are absolute range perfection, and that one in your home will cut the **fuel bill** and **housework in half.** Let us explain to you how we sell direct to you, from our factory at

ACTUAL WHOLESALE PRICES

and thus save you $15 to $40 profits of middlemen and dealers. We give with every range a **TEN YEAR GUARANTEE,** which is as broad and binding as we can make it. Is it not worth a minute's time and a postal card to send for our catalogue which tells all about this liberal special offer? Our catalogue shows over one hundred different styles and sizes of Wood Cook Stoves, Heating Stoves, Steel Ranges, etc. We are making many other liberal offers for the summer months. Are you interested? If so, **SEND POSTAL FOR CATALOGUE "G" 10 NOW.**

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Descriptive folders free.

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Think of It!

A whole section, 640 acres, in the wheat country, only four miles northeast of Wakeeney, on the Union Pacific, in Trego County, Kansas, for $8 per acre. Liberal terms. This is Sec. 25, T. 11, R. 23. Address at once:

Frank J. Brown,
Exclusive Agt., Topeka, Kansas

SEED WHEAT

For sale. Pure wheat of my own raising which made the following averages, per acre: Zimmerman 45 bu's., Fulso-Mediterranean, 41 bu; Karkoo, 40 bu; This wheat recleaned and sacked, either variety. I will sell at $1.10 per bu. f. o. b., Manhattan. Checks accepted. Address A. F. Huse, Manhattan, Kan.

MOSQUITOS WON'T STAY

In houses where MITSU INCENSE is burned, Sweet scented and beautiful. Used throughout Japan. To introduce, full package for 10 cents. Send to-day. **Mitsu Incense Co.,** Kansas City, Mo

Dairy Interests

Cow Paths that Lead Far Apart.

WILBUR J. FRASER, CHIEF IN DAIRY HUSBANDRY UNIVERSITY OF ILLINOIS.

Here at the experiment station are two cows, the story of whose work is worth telling wherever cows are kept. They were both bought for good producers but they didn't turn out alike. In fact their progress has been in opposite directions, and yet it is hard to tell which has the more valuable message to Illinois dairymen.

These animals are neither freaks nor creations of the college, and they have not been abnormally developed to produce different results. They were brought up alike on the farm and obtained their early education in the same herd of one hundred cows in the Elgin region. Here at the University, with the same identical surroundings and equal opportunities, they have drifted far apart in character.

It is not a difference of hide or horns or temper; not that one is wild and the other a pet; it is not a difference of beauty or intelligence or morals. The only difference worthy of note is a difference in work, in earning money for the owner. Here is how they differ.

THE TWO RECORDS FOR THREE YEARS.

The milk of each of these cows has been weighed and tested and an exact record of its amount and quality kept for the whole period, and every pound of the feed consumed by each cow, both summer and winter, has been set down in definite terms.

During the past three years cow No. 1 has produced 34,171 pounds milk containing 1,214 pounds butter-fat, and cow No. 2 in the same time has yielded but 11,491 pounds milk with 414 pounds butter-fat. This makes the annual production of the one, 11,390 pounds milk and 404 2-3 pounds fat; and of the other, 3,830 pounds milk and 138 pounds butter-fat.

These cows were both cared for in the same way and given the same kinds of feed and encouraged to eat all they could make good use of. Cow No. 1 ate 1.56 times as much as cow No. 2, but produced 2.97 times as much milk and 2.93 times as much butter-fat. Or reduced to a like feed basis, No. 1 produced 1.88 times as much as No. 2.

259 VS. 138 LBS. FAT ON THE SAME FEED.

Feed fed to No. 1 produced 1.88 times as much butter-fat as when fed to No. 2; that is, equal amounts of feed made 188 pounds fat when fed to No. 1, but only 100 pounds when fed to No. 2. Each year, No. 2 got only 138 pounds butter-fat from the same quantity of food that No. 1 changed into 259 pounds fat. The one cow is nearly twice as good a producer as the other on exactly the same feed.

This sounds significant. It gives a big hint as to the kind of cows to keep. But it represents only the parting of the ways. Let us follow these cows further. What does this difference mean to the practical farmer keeping such cows for the money there is in it?

$42.60 PROFIT VS. $2.86 LOSS.

Counting the butter-fat at 25 cents per pound, one cow returns $101.16 and the other $34.50 per year. Taking out the known and exact cost of feed in each case, the one cow brings in a clear profit of $42.60 per year, and the other lacks $2.86 of paying for her board at market prices of feed.

Forty such cows as No. 1 would return a dairyman a clear profit of $1,704 per year, and a herd of eighty would make him $3.408 above all expenses. The latter is a very good stroke of business to do with a herd that could be maintained on 200 acres of good land.

THE EMBARRASSING COW.

But what about cow No. 2? Her record embarrasses the situation (and it would embarrass the dairyman owning her too). If she had made $2.86 profit, there would be at least something to compare with. Then it would only take fifteen such cows to equal a single cow like No. 1. But No. 2 didn't do it. It was $2.86 loss instead of profit. For profit in milk production, a thousand or a million such cows would not equal one of the other kind. Here is where numbers don't count, or rather where they count in the wrong direction. This is one of the few places that algebra comes in; the comparison, if any, must deal with a minus sign.

IT MEANS TWO FARMS OR NO FARM.

The man with eighty cows like No. 1 could clear up enough money in ten years to buy another farm of 200 acres (at $100 per acre) and have more than the price of a third such farm to go into family expenses and improvements. But his neighbors, with a herd of eighty cows like No. 2, losing $229 every year and having to pay out of pocket all the expenses of living, would, within the decade, have his farm well plastered with mortgages with the probability of losing it all. Indeed, fully as striking a contrast as this is known to the writer as having actually taken place in a certain dairy neighborhood of Illinois.

While the contrast between these two cows is striking and startling, it is in accord with the actual facts, and being complete and accurate for a three-year period, and including the feed as well as the milk record, it means a great deal more than a single year's comparison, or a comparison in which it is necessary to introduce an "if" or an unmeasured element. Only the feed and the butter-fat are here considered. It is figured that the calf, the skim-milk, and the manure are well worth the labor and the interest on investment.

IT'S ALL OVER THE STATE, TOO.

A single instance or a few exceptional cases of this kind wouldn't mean much. But the writer knows from the actual testing of 800 cows in 40 different herds that there must be thousands of individual contrasts as great or greater than this in the dairy-herds of Illinois, and to indicate how widely such differences in production enter into the practical business of dairying, the following additional data is given:

In eighteen dairy-herds, in one section of Illinois, containing 323 cows of which this station made a full year's individual test and record, there were fifty-two cows every one of which was as poor or poorer a producer than No. 2 (the highest yielding only 138 pounds butter-fat), and there were forty-three that produced 280 or more pounds butter-fat each.

FIFTY COWS AVERAGE ONLY 116 LBS. FAT.

The poorest fifty cows in this 323 averaged only 116 3-5 pounds butter-fat for the year, while the best fifty averaged 319 pounds butter-fat. The best fifty produced 273 pounds fat for every 100 pounds produced by the poorest fifty—a difference of nearly nearly three to one.

Several other cows in these herds produced but little above the poorest fifty, their clear profit if any, under any possible system of feeding, being too small for a dairyman to afford to keep them. So the profitless cow is seen to be a real and living issue of large proportion in dairying for bread and butter. Fourteen of the eighteen herds had cows as poor as No. 2, and there were from one to twelve of these poor cows in each herd.

MORE NEARLY THE SAME FEED.

The feed of these cattle can not be stated so exactly as in the other case. But it is known that on the average they were kept much cheaper on the farm than were the two University cows (which were not turned to pasture), and also that as a rule no chance was given for such a difference in the cost of feed as between No. 1 and No. 2. Observing and inquiring into the methods of feeding on many farms indicate that few dairymen actually give one cow much advantage over another in feed. So this difference in production may easily mean a difference in profit still wider than that between No. 1 and No. 2. The record here is only for one year, but the hundred cows involved tend to keep the average representative.

THE DIFFERENCE IS $50 PER COW...

Computing the butter-fat at 25 cents a pound, as in the other case, the poorest fifty cows made an average return of $29.15 and the best a return of $79.75. The feed of a cow is seldom estimated lower than $30 per year, and it may go much higher even on the farm. It is seen at a glance that there is no money whatever in the one class of cows and that there is very good money in the other class.

THE COW AND THE TIGER.

The above data are representative of actual conditions in Illinois. One of the greatest and easiest steps of improvement in the dairy-business today is to discover and weed out these poor cows. The butcher will take them, and he is the only man who can get any money out of them.

The only farm that is able to keep this kind of cattle is—the poor farm, and the farmer who keeps them is headed for the same place. The only excuse for boarding No. 2 that is not a reflection on the owner is—misguided charity.

Many dairymen would just as soon think of hunting for tigers in Illinois as for profitless cows, and would be just as much surprised to find such a cow as to come upon a "man-eater." These cows may not carry off our children but they will take the bread out of their mouths.

HOW TO HUNT THEM.

Within sight from almost every rise of ground and barnyard gate, these presuming bovines walk forth unchallenged to pasture and plenty, and there is nobody to inquire what return they make. They "make a hand" easily enough in chewing grass and licking up bran and cornmeal, but they do no udder business.

The biggest game in Illinois to-day is this same profitless cow. The only weapons required to bring her down—and the only ones that will—are the scales and Babcock test. Isn't it time to stop guessing at these vital elements in the profit of the dairy-business and to find out for sure—by weighing and testing the milk—what each individual cow is earning for the owner?

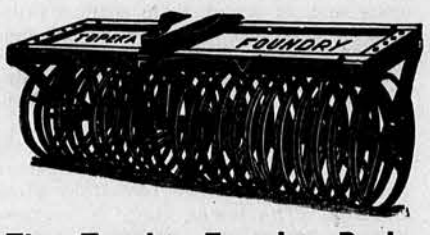
The noblest character would soon degenerate if it should lose the love of excellence.

"THE WORLD'S STANDARD"
DE LAVAL CREAM SEPARATORS
THE DE LAVAL SEPARATOR CO
74 CORTLANDT ST. NEW YORK. RANDOLPH & CANAL ST. CHICAGO.

DAVIS LOW DOWN SEPARATOR
Goes direct from factory to you. No state agents or traveling salesmen to pay. Straight factory prices. And it's absolutely the
Easiest to clean, easiest running, simplest separator on earth. We guarantee that with a Davis your profits will increase $10 per cow while cutting your labor in two. Freight prepaid. Send for money saving catalog No. 128 right now and investigate.
DAVIS CREAM SEPARATOR CO.
54 O North Clinton St., Chicago, Illinois.

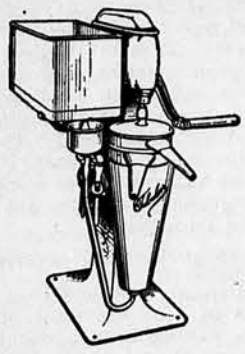
The Arch Pump Equalizer
will equalize the stroke of pump so it will pump with any visible breeze. Will fix your pumps so the Mill will *not stop on the upstroke* just before it passes center stand and wait for more wind. Will fix pump so wife or children can pump. Price $1.50.
The Arch Pump Equalizer Co.
Council Bluffs, Iowa.

MAKE RAIN
When You Need It
Pack your ground. Save the moisture. By getting an early start and a full stand your crop of corn is assured.



The Topeka Foundry Packer
Will Do It
Write for prices and testimonials.
TOPEKA FOUNDRY CO.
Topeka, Kansas.

Because You Need The Money
It's your business and if you don't attend to it, who will? You cannot afford to keep cows for fun. That isn't business, and, furthermore, it isn't necessary. There is money in cow keeping if you go at it right, and besides there is more fun in going at it right than there is in staying wrong.


You need a Tubular Cream Separator because it will make money for you; because it saves labor; because it saves time; because it means all the difference between cow profits and cow losses.
Look into this matter; see what a Tubular will do for you and buy one because you need it.
How would you like our book "Business Dairying" and our catalog B. 165 both free. Write for them.
The Sharples Separator Co.
West Chester, Pa.
Toronto, Can. Chicago, Ill.

Only High Grade Cream Separator at a Reasonable Price. CLEVELAND Cream Separator Direct to You.
Easy running because it is the only all ball-bearing separator made. Easy to clean because it is the first of the separators to use the wonderful metal, aluminum in its skimming device. A guaranteed perfect skimmer. The longest lived because it has the fewest parts to wear out. Thirty days free trial. On your own farm and under your own conditions. That's the way to buy a separator. And the Cleveland is the only high grade separator sold direct from factory to you and put to work on your own farm without your putting up one cent in advance. Write for the free catalogue that tells the whole story.
THE CLEVELAND CREAM SEPARATOR CO., Dept. E, 34 Michigan Ave. N. W., Cleveland, O.

TIME IS THE TEST
of durability in a high-speed machine like the cream separator. No other machine a farmer uses has harder use. Run twice every day, winter and summer, it must not only do thorough work, but to be permanently profitable, it must be durable.

U.S. CREAM SEPARATORS
are built for long service. A solid, low frame encloses entirely all the operating parts, protecting them from dirt and danger of injury. The parts are few, simple and easy to get at. Ball bearings at high speed points, combined with automatic oiling reduce wear as well as insure the easiest operation. Such careful and thorough construction is what enables the U. S. to better
STAND THE TEST
than any other separator. You don't have to buy a new one every year or two. And remember: the U. S. does the cleanest skimming all the time.
Look into this. Write today for a copy of our handsome, new separator catalogue. Ask for number 91 . It is finely illustrated and tells all about the U. S. Address
Vermont Farm Machine Co., Bellows Falls, Vt.
Prompt deliveries of U. S. Separators from warehouses at Auburn, Me., Buffalo, N. Y., Toledo, O., Chicago, Ill., LaCrosse, Wis., Minneapolis, Minn., Sioux City, Ia., Kansas City, Mo., Omaha, Neb., San Francisco, Cal., Portland Ore., Sherbrooke and Montreal, Que., Hamilton, Ont., Winnipeg, Man. and Calgary, Alta.
Address all letters to Bellows Falls, Vt. 447

Miscellany

Unnecessary Fear of Insects and Spiders.

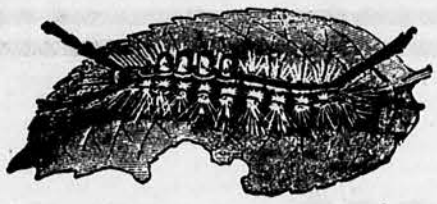
ELBERT S. TUCKER, MUSEUM ASSISTANT IN SYSTEMATIC ENTOMOLOGY, UNIVERSITY OF KANSAS, LAWRENCE.

Insects and spiders are generally feared as poisonous creatures, often more so than they should be. Of course, a person would wisely avoid molesting any of the stinging bees or wasps, ferocious spiders, predaceous bugs, and some kinds of caterpillars; but not all these creatures are as bad as they look. The insidious bite of a mosquito can result in greater harm than that of a rattlesnake, and such pests are to be dreaded above all other insects.

POISONED BY A CATERPILLAR OF THE WHITE-MARKED TUSSOCK-MOTH. (Hemerocampa leucostigma, Smith & Abbott.)

Many of the hairy or spiny caterpillars can cause an irritating effect on the human skin should their hairs, bristles, or spines be pressed into contact with an exposed surface of a person's body. Such occurrences, however, are usually accidental.

A case of such poisoning happened in August, a year ago, to a little girl, 9 years of age, living in Lawrence. She complained of something biting her back under the clothing below the neck, and had rubbed the place several times only to increase an itching feeling. Her mother opened the dress and found a hairy caterpillar, about



Caterpillar White-marked Tussock Moth.

an inch long. It proved to be a common species, the beautifully ornamented kind which produces the White-marked Tussock-moth. Small blisters soon formed over the area of the skin on which the caterpillar had been rubbed, caused by the prickling of the hairs that were nearly all torn from the caterpillar's body. The caterpillar had evidently fallen from a walnut-tree, probably being jarred off by the motions of the little girl in a swing which was hung from a limb, and by alighting on her, finally crawled under her dress at the back of the neck where it was first felt.

By bathing the irritated spot with a lotion, the smarting and itching were soon allayed; the blisters, however, required time to heal. A formula for making the kind of lotion that was used is as follows: To a strong solution of alum water—as strong as can be made—add one-fourth quantity of aromatic vinegar and one-fifth of glycerine. When stung by insects or bitten by mosquitoes, this mixture will give quick relief if the affected parts are bathed freely with it.

THE LAWN TENT-MAKER (Agelena nævia, Walckenaer.)

A kind of spider, known as Agelena nævia, was brought to the entomological museum, June 19, and complaint was made that the webs of this species were so thick on the lawns in Lawrence as to be a nuisance. Information was wanted regarding the habits of this spider, and one had only to turn to the right book to find it and prove how harmless the creature is in life. Perhaps the readers of THE KANSAS FARMER will enjoy reading an extract of a popular account of this interesting animal so entertainingly told about by Alice Jean Patterson in her book entitled, "The Spinner Family." Permission to quote from the work of this author was kindly granted by the publishers of the book, A. C. McClurg & Company, of Chicago, Ill.

"Have you ever looked out of your window on a summer morning to find the yard below completely covered with small white tents? You half suspect that a regiment of fairy soldiers camped there during night, and forgot to hie away at break of day, as all good fairies are expected to do. By the time the sun has been shining two or three hours the tents have apparently disappeared, and you are almost ready to believe in the fairy story. Nevertheless, the tents do not belong to fairies, neither have they disappeared. They have become invisible, because the dew with which they were covered in the early morning has all evaporated. They are the homes of the tent-makers among the Spinners.

"The dwellers in these tents are commonly called grass-spiders, because so many of them live in the grasses of the lawns and meadows. Their real family name is Agelenæ, but if we are to talk about one member of the family, we shall call her Agelena.

"Mrs. Agelena does not carry her tent about and pitch it where she chooses, as you do when you go camping in the summer time. But she decides where it is to be, and then skillfully sets about weaving the cloth and pitching the tent at the same time. She fastens her warp to the blades of grass on every side, then she works in the woof by walking rapidly back and forth and spinning as she goes. When the tent cover is of sufficient thickness, she fastens numerous guy-ropes to the blades of grass both above and below. She has no intention of having her tent blow away because of insecure fastening.

"When we look closely, we see that after all this is no ordinary tent. But then you would not expect a Spinner to make an ordinary one, would you? It has a stairway leading from the flat roof to the ground floor beneath. It is a pretty tunnel-staircase slanting obliquely downward. There are no steps, but Mrs. Agelena does not need steps when she has twenty-four claws to help her to climb up a smooth surface. Sometimes this elaborate tent has a cellar as well as a ground floor. This is a crack or a crevice in the ground. When this is the case, the stairway always ends in the cellar.

"Mrs. Tent-maker is always at home. If you are very, very quiet as you approach her house, you will find her sitting in her stairway peeping out upon the roof. If you disturb her by shaking the grass-blades, you will probably catch a glimpse of her eight legs as she whirls down her stairs and seeks a place of safety in her cellar, or among the roots of the grass on the first floor. Mrs. Agelena does not build a new home every night, as the orb-weavers do. Indeed, if you do not ruthlessly tear down her tent with your lawn-mower or sickle, she makes one last several weeks. True, she fixes it up occasionally, putting a new border around it, and a fresh layer of threads on the upper surface.

"Like the orb-weavers, the tent-makers use two kinds of silk. The tent is made chiefly of the dry, inelastic kind, but over the upper surface there are stretched a few threads of the gummy, elastic silk. You can determine this for yourself; touch the under surface of the tent with your finger, and nothing happens. When you touch the upper surface, some of the threads stick to your finger. The reason for the sticky threads is obvious. If a fly or beetle or cricket happens to step or alight upon Mrs. Agelena's tent, it becomes tangled up in the threads, and before it can extricate itself, Mrs. Spinner has darted from her stairway, where she has been hiding, and clutched the luckless insect in her claws. She dashes down the stairs, and hides among the grass-roots, where she dines at her leisure."

The person who reads "The Spinner Family" will concede some respect in place of fear for the spiders.

(The book, which is handsomely bound and fully illustrated, can be supplied by the publishers of the KANSAS FARMER for $1.25, postpaid.)

Gray and Block Ox-Flies.

In a separate box I send you some specimens of the insects that abound in this locality and which are new to me. You may possibly remember me as one of the short-course boys of 1901. Any remarks you may see fit to make through THE KANSAS FARMER will reach me. H. B. GILES.

Butler County.

The large gray fly and the large black fly belong to the genus Tabanus, and may be known as the gray and black ox-flies respectively. They are closely related to the common green-head horse-fly, but affect cattle more than horses, though often biting the latter severely. The flies of the genus named are all very bloodthirsty, and will attack all domestic animals if not prevented by nets or covers. The females alone are capable of biting, the males being unprovided with the strong, sharp beaks of their partners. The males are recognized otherwise by their broad eyes that meet along the middle line of the head. The grubs of these flies live in moist ground and feed on other subterranean insects, but the annoying attacks of the adults offset any good that we might otherwise see in the species. Repellant washes on the animal will relieve

SIMPSON EDDYSTONE PRINTS

Simpson - Eddystone
Silver Greys

Fast color is not merely a name but a splendid reality in these dependable dress-goods. They wash repeatedly without fading. Appropriate to wear any time of year.

Ask your dealer for Simpson-Eddystone Silver Greys

Three generations of Simpsons have made Simpson Prints.

The Eddystone Mfg Co (Sole Makers) Philadelphia

How About YOUR Ensilage?

"OHIO" Ensilage Cutters cut two ways—cut and elevate the corn into silo at an amazing speed; and cut off huge slices from your ensilage expenses.

How does it "cut" expenses? By its immense capacity, its self feed mechanism, its power-saving direct draft blower, its simply operated silage distributor, its minimum use of power for maximum results.

Silage as a milk and beef producer is far superior to grain. Our book "Modern Silage Methods" (10c) tells all about it. Our Ensilage Cutter Catalog will easily convince the man who wants the best. Send for it. Manufactured only by

The Silver Manufacturing Co., Salem, Ohio.

Destroy the Gophers

In Your Alfalfa Fields by Using

Saunder's Gopher Exterminator

It is a machine which forces a deadly gas through their runways and is warranted to kill gophers within 100 feet of operation. With it a man can clear from five to six acres of gopher-infested land in a day at a cost of twenty cents per acre. The poison we use can be gotten at any drug store. Satisfaction guaranteed or money refunded. Complete outfit for $5.

Flint Saunders, Lincoln, Kansas

Mention The Kansas Farmer.

WALNUT GROVE FARM

...FOR SALE...

Upon the advice of several specialists I am going to New Mexico for my health. On this account I must dispose of all my Kansas property, including the famous Walnut Grove farm, the most complete and profitable stock farm in Kansas. This includes 130 acres of the best land in Kansas, two miles from Emporia. Over 200 good O. I. C. hogs. All our Barred Pymouth Rocks, 36 Collies, 44 head of cows, 8 head of horses, the best farm house in the State. Also one small farm house, 2 large barns, 2 large cattle-sheds, one 300-foot hen house, one 250-foot broiler house, 20 brooder houses, capacity of plant, 4,000. The best hog house in the West, double-deck cement floors; many small hog houses. This is not an experiment, but a successful stock farm. Price, $20,000 cash.

H. D. NUTTING, Emporia, Kans.

Santa Fe

Low Rates to Summer Resorts

Never before have there been such low rates to so many of the desirable resorts as there are this year. The following list contains rates only to a few of the more important of these. If you want rates to other points, give me their names and I'll quote lowest rates to those or the nearest place.

Chicago, Ill., Aug. 4, 5, and 6. Limit Aug. 15	$10.40
Chicago, Ill., Aug. 11, 12, and 13. Limit Aug. 22	10.40
Chicago, Ill., daily to Sept. 30. Limit Oct. 31	20.00
St. Louis, Mo., daily to Sept. 30. Limit Oct. 21	12.70
Milwaukee, Wis., Aug. 11, 12, and 13. Limit Aug. 23	13.40
Minneapolis, Minn., Aug. 11, 12, and 13. Limit Sept. 1	10.80
Los Angeles, San Francisco, Cal., daily to Sept. 15. Limit Oct. 31	60.00
Grand Canyon of Arizona, daily to Sept. 15. Limit Oct. 31	55.00
Denver, Colorado Springs, Pueblo, Colo., daily to Sept. 30. Limit Oct. 31	17.50
Asbury Park, N. J., daily to Sept. 30. Limit Oct. 31	58.50
Long Branch, N. J., daily to Sept. 30. Limit October 31	53.45
Ocean City, N. J., daily to Sept. 30. Limit Oct. 31	54.45
Cape May, N. J., daily to Sept. 30. Limit Oct. 31	54.45
Kingston, Ontario, daily to Sept. 30. Limit 30 days	*35.60
Montreal, P. Q., daily to Sept. 30. Limit 30 days	*36.05
Quebec, P. Q., daily to Sept. 30. Limit 30 days	*38.65
Toronto, Ontario, daily to Sept. 30. Limit 30 days	*30.90
Halifax, N. S., daily to Sept. 30. Limit 30 days	*50.50
Alexandria Bay, N. Y., daily to Sept. 30. Limit 30 days	*36.05
St. Lawrence, N. Y., daily to Sept. 30. Limit 30 days	*36.05
Thousand Island Park, N. Y., daily to Sept. 30. Limit 30 days	*36.05
Bar Harbor, Me., Aug. 8, 22; Sept. 5, 19. Limit 30 days	*43.55
Bellows Falls, Vt., Aug. 8, 22; Sept. 5, 19. Limit 30 days	*36.05
Fabyan, N. H., Aug. 8, 22; Sept. 5, 19. Limit 30 days	*36.50
Old Orchard, Me., Aug. 8, 22; Sept. 5 19. Limit 30 days	*39.28
Concord, N. H., Aug. 8, 22; Sept. 5, 19. Limit 30 days	*36.05
Portland, Me., Aug. 8, 22; Sept. 5, 19. Limit 30 days	*39.00

*With limit of 15 days, $2 less.

You may avoid the summer's heat by going to some one of these resorts. Why not let me know your plans? Pullman sleepers, free chair cars, and Harvey meals via Santa Fe.

T. L. KING, City Passenger Agent,
The Atchison, Topeka & Santa Fe Ry. Co.,
Topeka, Kansas.

the suffering cow or horse from the attacks of stable-flies to some degree, but they will have no effect on these large blood-suckers, and a good cover is only a partial protection from them. Fortunately, their season is not very long, and excepting the green-head, which abounds in moist pastures, they are not abundant in individuals.

The large beetle, gray, with eye-like spots on the thorax, is the Eyed Snapper, or Alaus oculatus, living as a larva in dead or dying wood. It is of no importance economically.

E. A. Popenoe.

A Plea for Fair Play.

To the People of Kansas:—The company now owning and operating the Santa Fe Railway is a little more than ten years old.

Do you know that in that ten years the road has been largely rebuilt and largely re-equipped?

Do you know that the track on the main lines is as good as any in the country and better than most, and that the branches have also been improved in condition and service as fast as men and money could be obtained for the purpose?

Do you know that in order to accomplish these results the Santa Fe Company has spent in these ten years in Kansas alone not less than seventeen millions of dollars, part of which was taken from earnings that might have been distributed to stockholders, and the rest borrowed?

Do you know that the road is fully worth to-day the amount of its total capitalization?

Do you know that in these ten years the preferred stockholders have received total dividends of only 28¾ per cent, or 2.87½ per cent per annum, and that common stockholders have received but 21½ per cent. or a little over 2 per cent per annum?

Does it strike you that these payments are excessive, or that those who risked their savings in the enterprise have received too great a reward? How does this return compare with those of the farmer or business man on his investments?

Do you know that in Kansas the passenger train mileage of the Santa Fe has about doubled in the last ten years and that its trains are as comfortable and luxurious as those run anywhere in the world?

Do you know that the passenger rates are as low as they are in any State west of Ohio and Michigan, notwithstanding that you have only 18 people per square mile, while Illinois has 86, Iowa 40, Missouri 45?

Do you know that many passenger trains in Kansas are run at an actual loss and solely for the accommodation of the public?

Do you know that while the people of Kansas would individually save but little money by a reduction of passenger rates, the effect of such reduction would be keenly felt by the railroads, because it would reduce nearly all interstate rates, so that for every dollar saved by a citizen of Kansas the railroad company would lose several thousand dollars?

If you know all these things to be true, what reason or excuse is there for demanding that your legislature pass a law attempting to reduce the passenger rates?

We think we can demonstrate to any court or other tribunal that a reduction in passenger rates is unjust, and is equivalent to confiscation of our property, but we do not want to conflict with our patrons; we do not want to be continually litigating in the effort to preserve our rights. We believe that when the people know the facts, the misrepresentations of demagogic politicians and a sensational press will not be regarded.

The Santa Fe desires to conduct its business fairly and with due regard to the rights of the public; it raises no objection to public supervision and reasonable regulation; it desires above all things to keep out of politics, yet, when attacked it must defend itself, and when the sole platform of a candidate is that he is "agin the railroads," we are fully justified in protesting against his election. That is what every man and every interest in the State would do if attacked.

If my statements are true, you can not believe that the agitation for a two-cent-rate bill is justifiable; if you doubt the statements, or any of them, I can prove them correct.

I do not desire to be drawn into a newspaper controversy with politicians or demagogues, but should this fall into the hands of any honest voter, who doubts my statesments, or desires further information, I hold myself in readiness to answer any communication addressed in good faith.

(Signed) E. P. Ripley,
President A. T. & S. F. Ry. Co.
Chicago, August 1, 1906.

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.)
Third Quarter. Lesson VII. Luke xv, 11-32. August 12, 1906.

The Parable of the Two Sons.

A son in a noble and wealthy family, chafing under parental restraint, or having exhausted local means of dissipation and sighing for fresh fields of voluptuous conquest, inconsiderately requests an ante-mortem division of the estate. The indulgent father makes it. Perhaps he has no recourse; parental authority is at an end. The son's heart is callous to the appeal of love; sin has indurated him. The guileless youth, the father's pride and joy, has grown the gruff, defiant rebel to whom the amenities of home are insufferable.

In the shortest time possible, the infatuated youth tucked the sparkling gems and golden bars, his patrimony in portable form, easily convertible into coin of any country, in the pockets of a money-belt, and, strapping it about his person, he went abroad—perhaps without even a ceremonious farewell.

He wasted his substance. He tossed it in the air (as per derivative), as the farmer does his wheat when he will separate it from the chaff. He lived dissolutely. He was insalvable (as per derivative) while his infatuation lasted. The coincidence of the devoured (literally) patrimony and the universal and extreme famine puts a pathetic touch to the sorry plight of the dissolute spendthrift. He was left behind (as per derivative) in the race. He never, in spite of his infatuated effort and extravagance, so much as reached the glittering goal of his wanton ambition. The gay, reveling party that kept him company while his means held out, swept past him thanklessly and disdainfully when his once plethoric purse was at last empty. He awoke as from a dream—alone! penniless!

With the pertinacity of despair he glued (literally) himself to a foreign land-owner, whom in his prosperity he would have dubbed a "Gentile dog"—with whom he would have had no intercourse, much less receive a favor from him. In his despair he cleaves to a foreigner so tenaciously that he can not be shaken off. A superlatively disgusting and degrading task is given him,—offensive to all the senses, repugnant to all the ideas of ceremonial cleanliness instilled in his mind from boyhood.

So sharp were the pangs of hunger that he kept coveting the swine their feed—the locust pods he threw down before them. What humiliation, sorrow, despair are compressed in the half-dozen words—"And no man gave unto him."

At last the hypnotic spell of sin is broken. Self-consciousness, self-control are regained. Memory paints the ancestral home. The flown blessing brightens. What abundance, comfort, care, there extends to the most abject menial. The veriest scullion has such a superabundance that he can pose as a benefactor before the tramp.

"I will!" What a battle-royal has preceded and made possible those talismanic words! Fear, shame, pride have been met and conquered. "I have sinned" is the correlate of "I will arise." Confession absolute and frank, without apology or plea in abatement, shall be made. The penalty and consequences of apostasy, disinheritance, servitude instead of sonship, shall be assumed without a syllable of complaint.

It is done. But how different the sequel from that which the prodigal anticipated! He is met long before he can reach the door where he expected to make his confession and prefer his modest request. The father's compassion, how admirable! Kiss of reconciliation, how sweet! The first robe, richly dyed and embroidered, is cast about the bare and sunburnt shoulders. The signet of rank is placed upon the wan finger. Bare feet, mark of servitude, are shod with the sandals of a free man. Now follows the joyous banquet.

The murmuring Pharisees can not but see themselves portrayed in the elder son, with his ill-formed, ill-natured protest. The true Messiah had come to heal the sick, raise the dead, find the lost. Will the hale, the unstrayed, those who do not need his kindly offices, begrudge them to their brothers, whose plight is so pitiable and desperate? The climax is reached, the plea unanswerable.

ANALYSIS AND KEY.

1. The "Pearl of Parables."
Primary object:
Intended to justify Jesus' attitude toward publicans and sinners.
Pictures renegades objects of Divine compassion.
2. Secondary object:
To picture sin as a revolt against the beneficent Father.
3. Incidental lessons.
Freedom of the will.
Folly of sin. Unsatisfying nature.
Desperate consequences.
Evangelical penitence.
Discriminated from legal.
The process and course of recovery.
The Divine Compassion.

Words are often seen hunting for an idea, but an idea is never seen hunting for words.

Denver, Colorado Springs, Pueblo and Return, $17.50. Santa Fe.

Tickets on sale daily, good returning as late as October 31, liberal stop-over privileges allowed. Fast Colorado Flyer from Topeka 10.35 p. m., arrives Colorado early next morning. Rock ballast track and Harvey eating houses. T. L. King, C. P. & T. A., Topeka, Kans.

G. A. R.
Encampment at
Minneapolis

Excursion rates August 11 to 14, inclusive.

Only $10.80 round trip from Topeka.

A chance to see the progressive Twin Cities and their beautiful environs.

Go via the Rock Island—a pleasant route, satisfactory service, quick time.

I would like to arrange for your accommodations.

Rock Island System

A. M. FULLER, C. P. A.
TOPEKA, KANSAS

A Tour Northwest

will take you through more scenes worth seeing and give opportunity for doing more things worth doing than any railroad journey in the world.

Your tour could include the Black Hills of South Dakota, Yellowstone Park, Colorado, Puget Sound and many other places not so well known, but possessing attractions for the trourist.

$75 to Yellowstone Park and return, via Billings or Denver, including stage thro' the Park and 5½ days' hotel accomodations.

$60 to Portland, Tacoma, Seattle, Vancouver, Victoria, Everett, Bellingham or New Westminster and return, via choice of direct routes.

$73½ to Portland, Tacoma or Seattle, going or returning via California. These tickets afford the opportunity of seeing the best of the west at least cost.

$55 to Spokane, Wash., and return, via choice of direct routes.

$50 to Butte, Helena, Great Falls, and Anaconda, Mont., and return, via choice of direct routes.

Tell me what you would like to do and see this summer and I'll plan a tour for you. For this service there is no charge.

Write to-day, please.

Burlington Route

A. D. BROWN, T. P. A.
823 Main Street, Kansas City, Missouri
Both 'Phones 278 Main

The Poultry Yard

Conducted by Thomas Owen.

State Show to Be Held at Wichita.

The next State Poultry Show will be held at Wichita, January 7 to 12, 1907. This was decided on at a meeting of the board of managers of the Kansas State Poultry Association, held at Topeka, August 1. For the last sixteen years, with one exception, the State show has been held in Topeka, and it was taken for granted that the next show would also be held here, till complications arose about securing the auditorium for the show week. A clash of dates for the possession of the auditorium occurred between the Kansas Day Club, the Mid-Winter Exposition, and the State show, and in the adjustment of the matter, the latter's dates were given to the Mid-Winter Exposition.

A little dissatisfaction over using the auditorium for the poultry show was engendered by one of the daily papers, or rather by one of the reporters thereof, who evidently had "odor on the brain." He couldn't write an item about the show without referring to the "odor" he imagined to be present. In order to suppress any animal odor that might come from the fowls, the management of the show were in the habit of using disinfectants each day, and it was this that he smelled, but we presume that his olfactory nerves were so blunted by his visits to the free-lunch counters of a Topeka joint that he couldn't tell the difference between the scent of the Limburger that he had been eating and the fumes of the formaldehyde that the chickenmen were using, and blamed it all on the chickens.

However, if Topeka didn't want the poultry show, there were other towns that did, and Wichita, Hutchinson, Manhattan, and Newton made very liberal offers for the show. Two of them offered $250 cash bonus besides free use of their largest halls. The offer of Wichita was accepted by the managers, and it is expected to be one of the best shows in the history of the association.

While it will cost a little more to ship birds to Wichita from Missouri and the East, we believe it will be a good place to send them, for it will be a new field for the breeders and will prove to be a good advertising point. Wichita is in the midst of the great poultry-raising sections of the State, and will draw many birds from Oklahoma, which is a regular paradise for poultry-raisers; so on the whole, we do not believe we will have fewer birds in Wichita than in Topeka. The State Poultry Association is now a State institution, and one thousand dollars annually is given by the State for premiums, so it is well to have the show passed around occasionally to other towns than Topeka. The same liberal premiums will be paid this year as last, viz., $10 for first pen, $5 for second, and $2 for third. In single varieties, $2 for first, $1 for second, and 50 cents for third will be offered on cocks, cockerels, hens, and pullets. The offer for best county display has been increased from $50 to $100. This is divided into four prizes, $50 for first, $25 for second, $15 for third, and $10 for fourth. These prizes are offered for the greatest number of birds scoring over 90 points from any one county. The county where the show is held is barred from competing for these prizes, so Sedgwick County will be barred this year, as Shawnee County was barred last year.

Mr. A. J. Kerns, of Salina, was appointed superintendent of the show, and an assistant will be appointed at Wichita, also an assistant secretary from Wichita.

The judges of the show will be D. T. Heimlich, Jacksonville, Ill.; A. B. Shaner, Lanarkville, Ill.; and J. J. Atherton, Emporia, Kans.

The secretary is Thomas Owen, whose address will be Topeka till about a week before the show, when he will go to Wichita and transact the balance of the work at that city.

Poultry Pointers.

The children of the family should be entrusted with the care of the poultry on the farm. Give them a share of the profits. Furnish them with the proper means of instruction in this duty, with books and current publications, and they will soon become enthusiastic breeders of a class of pets which will reward them and their parents for the comparatively small outlay incurred at the first start.

Defects increase with age, and it is best to dispose of all objectionable members of the flock early in the season. Do not keep any chickens that are stunted or that have glowing defects; they always degrade the appearance of a flock, and when once a fowl has been stunted it is not fit for breeding purposes, and, in fact, is not worth keeping. Disease, or a tendency to disease, is hereditary.

Discard all hens that show a tendency to lay on fat, and retain those that under proper feeding will convert the food into eggs instead of fat. If part of the flock convert the food into fat in place of eggs, the profit the layers might give is eaten up by the drones. No fowl should be retained that does not in some manner add to the profit of the flock.

Many times more poultry would be used if town and city people could get a young and choice fowl, and could know that it was choice. The markets of the world are open to us, too; let us make use of the great foreign demand, and this great demand in all our own cities. Mature the chicks early, selling off the roosters and surplus hens before they get old and unmarketable.

Some Rat Remedies.

We have not been entirely rid of rats for many years. Like the poor, they are always with us, and they have very "taking' 'ways. Some years ago they took a good share of our young chicks and ducklings. Sometimes we would miss ten, fifteen, or twenty of the young things, say a pound or more in weight apiece, in a single day, and we were puzzled to know what had become of them, until one day, tearing some boards loose in the building where the chicks were temporarily kept, we found more than a dozen dead chicks, with bodies still warm and bloody, stacked up along the wall. Since that time we have kept up an unceasing warfare against ratdom, but guns and traps seemed to avail very little against the pest until some cats were called to our assistance.. An old cat with four or five kittens was given the free run of all the outbuildings, with a castrated tom cat as an assistant, and there commenced such a rat slaughter that within a few months' time only occasional specimens of rats could be seen or heard. We have kept one or two cats ever since, and have not lost another chick or duckling from rat depredations. As a rat remedy, in short, we think that the equal of a good barn cat will be difficult to find. Sometimes, however, even a good barn cat is difficult to get, in which case we may have to fall back on traps and poisons.

A writer in one of the agricultural weeklies gives the following as a method that fails sometimes, and many times succeeds: "Spread fresh bread with sweet grease, such as is saved from frying bacon and pork. Rats will eat bread spread with gilt-edged butter, and they may like it better, but on the score of economy try grease spread liberally. Then spread 'Rough on Rats' on the grease, or any of the phosphoric pastes, and over this poison sprinkle sugar. Cut the bread into small squares and lay them where the rats run, a few in a place; but not where chickens, or hens, or children will get them. Do this in the evening, having set cans of water where the rats may find them easily. In the morning gather up what pieces of bread have not been eaten and bury them. If they have all disappeared during the night, rejoice. There will be fewer rats around for awhile. In the course of a week make a mush of cornmeal, mix the poison with it, sprinkle a little sugar over the top, and hide it away from them in some dark places. They will find it and eat it. Again rejoice. But do not place the same kind of dish for rats a second time in the same place. They are cautious and suspicious. Be more crafty in providing tidbits for them than they are cautious. Now a little beef, again, scraps of fish, and then bread and grease. Vary the temptation, and they will fall victims to it." Wherever poison is used, of course, every precaution should be taken to guard against accidents. We will not use poison as long as we can find other remedies, and we have never yet used any kind of poison to kill rats or mice in the house or cellar. Now and then a rat or two will take up their abode in our house cellar. In that case we resort to steel-traps, and we keep them set and baited until the intruder or intruders are caught, if it takes a month's effort. Keep everlastingly at it, and freedom from rats will be your reward. Let up on this fight for a while, and the trouble will soon begin anew.—Practical Farmer.

PLYMOUTH ROCKS

BARRED PLYMOUTH ROCK EGGS — From free range stock, no other fowls kept on the farm. Price $1 for 15; $5 for 100. Mrs. C. F. Brown, Box 61, Manchester, Oklahoma.

BLUE BIRDS—Barred to the skin. Hawkins Ringlet strain. Eggs, $1 per 15, $5 per 100. Minnie K. Clark, Lyndon, Kansas.

B. P. ROCKS AND BUFF ORPINGTONS—Eight grand matings. Send for price list on eggs and Collie pups. W. B. Williams, Stella, Neb.

White Plymouth Rocks
EXCLUSIVELY.

Good for Eggs, Good to Eat and Good to look at W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 289 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96½, and as good as can be found anywhere. Eggs only $2 per 15; $5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College Address THOMAS OWEN, Sta. B, Topeka, Kans.

About Poultry-Houses.

Some of us keep chickens because we like them; some keep chickens because there's money in them; others go into chickens to see if there's money in them. The first two classes build good houses for their poultry because they know that the best is the cheapest; the third class builds a cheap house because he expects to fail anyway.

There is money in chickens, but like every other business it takes brains and business capacity to find the profit; probably there's larger profits in poultry than in any other legitimate business for the capital invested, and providing that the manager is both capable and adapted to his chosen calling. The "good, cheap" house is a yawning chasm that has swallowed many promising beginnings. Both the fancier and commercial poulterer must have fertile eggs by the first of February, and about the only way to encompass such end is to have your hens laying all winter and the males in fine condition. These necessary conditions are impossible in the flimsy, cheap house. A male suffering with a frozen comb will not perform his duty. Hens properly housed and fed will lay the year round. I will here give some of my specifivations as rendered to a mechanic who is to remodel my plant this summer:

Houses to be built so that combs of males will not freeze when the thermometer shows 30 below zero, and a gale blowing; windows to be placed so that they may be opened for ventilation "above" the birds when at roost; to be so ventilated that frost will not form a rime on sides and ceiling of roosting quarters; buildings must be rat-proof; every fixing to be portable in order that lice and mites can be kept under control; nest-boxes to be dark so that hens will not contract the egg-eating habit; to be so arranged that cleaning and general care will be comparatively easy.

The man who is undertaking this job for me is a good chicken man, and he knows just what I mean.

During the years that I have "played" at keeping chickens, I have been very well satisfied with the colony plan; but that which was play a short time ago has now grown into strenuous work. I have to economize in labor; the colony plan is pretty and pleasant, but it takes too many steps, and the cost of building two colony houses would take care of the equivalent of three houses on the continuous plan.

I have not yet seen the ideal house for this climate, but I hope to be able to describe it after this coming winter. When you build, keep in mind that the comfort of the chickens is the first consideration; economy of labor and handling is a close second. A good house does not mean spending a lot of money for gim-cracks and silly fixings; but it means that the fowls' comfort is the first and final consideration; this is the greatest economy in the end.—Matt. W. Baldwin, in Poultry Topics.

Bloating in Turkeys.

I would like to have you tell me what ails my turkeys. They bloat very badly. The bloating starts under the wings. I have lanced the bloated places several times, and the bloating seems to be caused by wind. They bloat right up again. They will not eat anything. A SUBSCRIBER.

Answer.—Will some turkey-raisers please inform the correspondent through THE KANSAS FARMER the cause and remedy of this disease, as it is something we know nothing of.

LEGHORNS

ROSE COMB BROWN LEGHORN EGGS, 15 for $1, 50 for $2.50, 100 for $4. Mrs. John Holsney, Bendena, Kans.

BUFF LEGHORNS AND BUFF ORPINGTONS. Catalogue free. W. H. Maxwell, 1240 Quincy St., Topeka, Kans.

STANDARD-BRED SINGLE-COMB BUFF LEGHORNS—Headed by first prize pen Chicago show 1903 and took six first prizes and first pen at Newton 1904. Eggs $3 for 15. S. Perkins, 301 East First street, Newton, Kansas.

SINGLE-COMB WHITE LEGHORN cockerels, $1 each; two or more, 80 cents each. Fine white, pure, thoroughbred birds. Also a few Barred Plymouth Rocks, barred to the skin—fine, pure and vigorous; hens, cocks and pullets, $1 each; two or more, 80 cents each. All of our customers are very well pleased. We will make reductions on large lots. Meadow Poultry Farm, Coulterville, Illinois

EGGS FOR SALE—S. C. W. Leghorns, W. Wyandottes, $1 per 15. W. H. turkeys, $1.50 per 9. Emden geese, 20c each. W. African guineas, $1 per 17. All guaranteed pure-bred. A. F. Hutley, Route 2, Maple Hill, Kansas.

FOR SALE—Exhibition S. C. Black Minorca cockerels, $2. I guarantee them. Address George Kern, 817 Osage street, Leavenworth, Kans.

Pure Single Comb Brown Leghorn Eggs—30 for $1; 100 for $3. F. P. Flower, Wakefield, Kans.

Buff Leghorns S. C. Eggs, 30 for $1.25, 100 for $3. John A. Reed, Route 3, Wakefield, Ks.

Johnnie Chase, Glasco, Kas.
Breeds Black Minorcas, S. C. Brown Leghorns and Barred Rocks. Second to none in the state. Eggs, $2 per sitting.

WYANDOTTES

WHITE WYANDOTTES—Choice early hatched cockerels and pullets, at very low prices. Write me. S. W. Artz, Larned, Kans.

SILVER LACED WYANDOTTES—Thoroughbred cockerels, $2; pullets, $1.50. Jewett Bros., Dighton, Kansas.

SILVER LACED AND WHITE WYANDOTTES $1 per sitting of 15. Eggs guaranteed. Circular free. R. C. Macaulay, Route 1, Frederick, Kans.

LANGSHANS

BUFF LANGSHANS $4.00 per 13 eggs.

White $2, Black $2, $1 and $5 per 100; Buff Leghorns, Orpingtons, Cochins, S. and D. C. B. and White Leghorns, B. and W. Rocks, W. and S. L. Wyandottes, L. Brahmas, $1.50 to $2.00 per 15. Toulouse Geese eggs 20c each. M. B. turkeys, $1.50 and $2 per 9. Imported and native high-scoring blood in our yards. Mention Kansas Farmer when writing. America's Central Poultry Plant. J. A Lovette Mullinville, Kans.

RHODE ISLAND REDS

ONE DOLLAR buys 15 eggs of either Rose Comb R. I. Reds or Barred Rocks from prize-winning stock at the college show. Mrs. A. J. Nicholson, Manhattan, Kans.

MAMMOTH BRONZE TURKEYS

Eggs for Hatching
M. B. turkeys, $3 per 10. Golden Wyandottes, $2, $1.50 and $1.25 per 15. Satisfaction guaranteed. Mrs. A. B. Grant, Emporia, Kansas.

BRAHMAS

LIGHT BRAHMAS
More prizes than any breeder in the state; 10 firsts this season. Eggs, $150. Cockerels, $2 to $4. T. F. Weaver, - Blue Mound, Kansas

Light Brahma Chickens
Choice pure bred cockerels for sale. Write or call on Chas. Foster & Son, Eldorado, Kan. Route 4

BEE SUPPLIES

We can furnish you bee and all kinds of bee-keepers' supplies cheaper than you can get elsewhere, and save you freight. Send for our catalogue with discount sheet for early orders.
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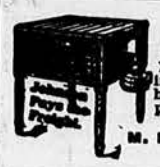

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More than your money's worth in incubators during the summer. We have them all beat; 40, 60 or 90 days to prove it. 5 year Guarantee.
Now is the time to write to
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"OUT THERE IN KANSAS"
All about the chicken industry in Kansas, the bees and pigeons. Full of information illustrated and made plain for the people. Practical, by and for practical people. The paper that reaches the chicken folks. If you are interested in poultry, bees, or pigeons, THE HEN will interest you. Address
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Gossip About Stock.

(Continued from page 823.)

sale on his Prospect farm. His herd is headed by Violet Prince 145647 by Lavender King 3d and out of Albino, and Orange Commander 220590 by Baron Golddust, dam Orange Lady. Baron Golddust is the bull that made the Dawdy herd, of Abingdon, Ill., one of the most famous of that State.

From these bulls and some of the best cows Mr. McAfee has a fine lot of young bulls and heifers for sale. On account of a desire to reduce the size of his herd, Mr. McAfee will sell a few cows that are tested breeders. Here is a great opportunity to get some choice Shorthorns at a very reasonable price, quality considered. We shall have more to say about this herd which is one of the oldest in Kansas. Prospect Farm is only 30 minutes' drive from the city, and Mr. McAfee will be glad to meet prospective buyers at the trains when notified. Note the advertisement and write about these cattle.

A visit to the Silver Lake Herd of Duroc-Jerseys, owned by W. C. Whitney, found about a hundred pigs sired by Lone Jack 30291 who was bred by B. W. Harnard, of Beemer, Mo., who showed him under 12 months at the Royal at Kansas City in 1904, when he took first in his class. Lone Jack has made a wonderful growth since that time and now weighs almost 900 pounds, and is one of the best boars we have ever seen. He is out of the same litter as Beatrice 72042 and Sallie Gordone 72044 who won first and second in their class last fall at Sedalia, Topeka, and Hutchinson. Lone Jack's sire is Second Surprise 20269 by old Surprise, and his grand sire on his dam's side is Wonder's Lad 17259 a full brother to Missouri Wonder This gives Lone Jack as rich breeding as the best and crossed with the good sows which Mr. Whitney owns, he is producing some pigs that are rich in breeding and quality. Mr. Whitney's sows carry the blood of such animals as Bessie H., Higgins Model, Tip Top Notcher, Oom Paul, and Orion, and they are in a thrifty growing condition. It will pay you to write Mr. Whitney or to visit his good herd.

Wm. Brandon, the proprietor of the Nemaha Valley herd of Durocs, at Humboldt, Neb., writes us that his stock is doing well and if it has continued to improve since we last saw it, he must have some good ones. When Mr. Brandon first started his herd, he met with several reverses and the first sale he held the stuff went for prices that would discourage the average man, but he kept up his courage and went ahead and to-day he is one of the most substantial breeders in Nebraska, and the prices received at his last winter's sale were among the tops of the State. He has now ready for shipment some fine pigs by such animals as Young Grant 16331A, Lewiston's Topnotcher, a grandson of old Tip Top Notcher and Surprise 12539 and out of such sows as Savanna Lady 24163, Katie L. 107144, No Mine 107134, Lady Maude 84628, Lady Grey 80548, and Daisy 33224, which contains some of the best blood in the country. If you want some new blood, write Mr. Brandon and tell him your wants.

The signatures of Ward Bros., of Republic, Kans., attached to the pedigree of Duroc-Jersey is always a guarantee of the superiority of that animal. Ward Bros. are among the oldest breeders of Kansas, and hogs of their breeding are scattered among many herds in Kansas, Nebraska, and Oklahoma. Their ideal of an animal is an individual that possesses great size and plenty of finish, and their herd bred along those lines is now the equal of any in the country. Ward Bros. are the owners of Model H. 37967 pronounced by many to be the best individual that Higgins Model ever sired. Model is an animal of great size and finish and no one has ever been able to find fault with him in any important points. He is an excellent breeder and a pig sired by him will be a valuable addition to any one's herd. Their other herd-boar, Shakespeare 3d, is a massive fellow weighing a thousand pounds and having a ten and a half-inch bone. Many of the sows sold in their last winter's sale were sired by this fellow, and not in a single instance has there been any complaint as to the pigs he produces. We consider this herd of Durocs one of the good ones of Kansas, and no one can make any mistake by buying of them. Write them and mention THE KANSAS FARMER.

Last week we visited the Evergreen herd of Poland-Chinas owned by James Mosher, of Belleville, Kans., and found about a hundred spring pigs which are making good headway towards becoming well finished, fully matured animals. Mr. Mosher commenced breeding pure-breds before any one else in Republic County thought of pure-bloods, and his career as a breeder for over twenty years was one of marked success. But during that time he had naturally drifted into the nursery business and eventually gave up the hog business until two years ago when he again started a pure-bred herd on a much larger scale. During these two years he has attended many sales and always bought the best, and when he saw one that he wanted, always bid until he got it which accounts for some of the big prices realized at some of the Northern Kansas sales last winter. Mr. Mosher's spring pigs are sired by Axie 38856 by Corrector's Son 27967, Lucky Strike 38068 by Sunshine 36265 and by Combination 39658, all three being well bred animals and good individuals. He has six pigs out of Guy's Queen that are fine fellows. Guy's Queen is a daughter of the famous Guy's Price who was bred by C. F. Hutchinson, of Bellaire, and developed and showed by W. T. Hammond the well-known breeder of Portis, Kans. She is a good individual as well as a producer of good ones. Mr. Mosher also has some fine litters out of Perfection 91146, Priceless Lady 1st. 96141, Little Pride 84932, White Face 91148, Cora Stewart 94710, Daisy Perfection 94708 Elsa 94704, Lady Moonshine 93518, Lail's Model 94707, Keims Model 94701, and many others of equal breeding. In fact his sows are all good ones and his pigs are among the best we have seen this year. It will pay you to visit this herd of Polands and see for yourself. Mr. Mosher is one of the best fellows in Republic County and a visit to his farm will be an enjoyable one.

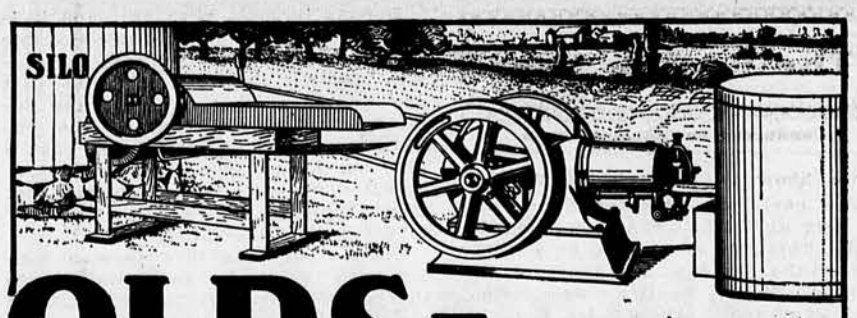
G. E. Newton, successor to Newton Bros., the big Duroc-Jersey breeders at Whiting, Kansas, writes as follows:

"Will you say to the boys that since I have had control of the herd I have decided not to hold a regular annual sale as has been our custom for 8 years, but will dispose of our stock at private treaty. The herd in bloodlines and individual merits never was so strong as now, and I have for sale 50 spring pigs, both sexes, that are beyond a doubt the best lot ever produced from this herd. I can furnish pairs or trios to suit. Price per head $20 to $25, according to quality of animal. I ship no culls, every animal will be worth the price asked or else I do not ship it.

"On the 2nd I had a litter of 12 farrowed from the yearling sow, Rockdale Queen 116150, she by Improver 3d 28361 by Improver 2d 13365; dam Horning's Choice 50402 by Czar H. 11553. This litter is sired by Chandler's Wonder 43441, the grandest son of old Crimson Wonder. Chandler's Wonder is, in my estimation, as good if not the greatest individual of any living Duroc-Jersey hog on earth. He is surely the grandest pig it has ever been my pleasure to see, with no exceptions.

"Remember when you deal with me you will be treated honerably, as my motto is and always has been: 'Honesty is the best policy.' Write me for cattle, hogs, or chickens."

The Famous Fancy Herd of Durocs owned by John W. Jones and Son, of Concordia, is in a thriving condition and its crop of over one hundred and fifty spring pigs are developing muscle and bone at a rate that is a surprise to even the veteran breeder, John W. Jones, the senior member of this firm. Mr. Jones is one of the most interesting breeders we ever met. His love for the business can not help but win one's admiration; his knowledge of scientific feeding, gained by years of experience and careful study, is always appreciated by the field men; his familiarity with pedigrees astonishes the best posted field men and breeders; and the individuals he is producing is the result of a thorough knowledge of his chosen life-work. Few Duroc-Jersey breeders are better known than John W. Jones. His stock is widely scattered, and by maintaining a square-deal policy every animal he has sold has been a testimonial of the excellence of his herd, and this firm has long since passed the place where the question of being able to dispose of their stock enters into the business. Last week we paid a visit to the Famous Fancy Herd and spent a profitable and enjoyable day with Jones and Son, inspecting and admiring their stock. First we were shown the sires



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There is no gas engine as simple as Olds—compare it with others and this statement is proved. The **repairs cost practically nothing.** Every adjustment is very simple to make. Exact duplicate of any part can be furnished at once, perfectly machined and ready to put on. This is important in case of accident.

The Most Economical Engine

For feed grinding, sawing wood, churning, threshing, pumping, running cream-separator, etc. Our reference, the User—The Man with the Olds. The reason why is interestingly told in our catalogue mailed on request. Tell us your requiremnts and **we will help you** figure out what you need. Send for our catalogue showing Type A (2-8 h. p.), Type G (8-50 h. p.), Types K and N (12-1200 h. p. used with our Gas Producer it will reduce fuel cost 75 per cent.)

Celebrated Picture Free

For 4c in stamps to pay cost of mailing we will also send you Rosa Bonheur's "Horse Fair," the most celebrated animal picture in the world, size 16 x 20, beautifully colored, suitable for framing.

OLDS GAS POWER CO., Lansing, Mich.
20 Chestnut Street
Branch Offices--Kansas City and Omaha

Weather Bulletin.

Following is the weekly weather bulletin for the Kansas Weather Service for the week ending Aug. 7, 1906, prepared by T. B. Jennings, station director:

CLIMATOLOGICAL DATA FOR THE WEEK.

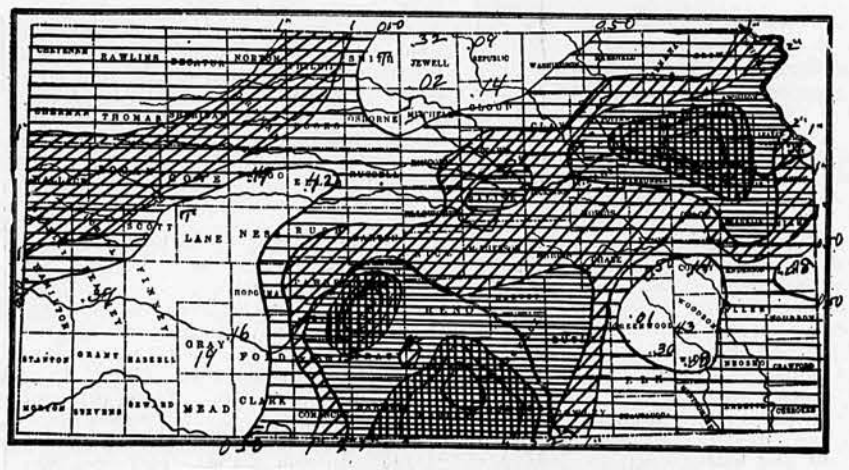
	Temperature.				Precipitation	
	Maximum.	Minimum.	Mean.	Departure from norm'l	Total.	Departure from norm'l
WESTERN DIVISION.						
Cimarron	92	58	74	...	0.19	.....
Colby	93	53	74	...	0.52	.....
Coolidge	102	55	78	...	0.50	.....
Dodge City	91	60	76	—1	0.16	—0.54
Dresden	96	57	..	...	0.44	.....
Farnsworth	93	55	74	...	T	.....
Goodland	96	51	74	...	0.74	.....
Lakin	90	50	73	...	0.39	.....
Norton	95	53	76	..	0.07	.....
Scott	95	56	76	..	0.77	.....
Tribune	..	..	..	...	2.00	.....
Wakeeney	95	55	76	...	0.49	.....
Wallace	98	50	74	...	1.25	.....
Division	102	50	75	...	0.58	.....
MIDDLE DIVISION.						
Anthony	..	..	..	...	4.54	.....
Chapman	96	57	77	...	1.45	.....
Clay Center	98	56	78	...	0.72	.....
*Coldwater	89	62	..	...	0.51	.....
Concordia	95	60	77	...	0.14	—0.55
Cunningham	91	60	76	...	0.80	.....
Eldorado	91	56	76	...	2.31	.....
Ellinwood	91	59	74	...	1.90	.....
Ellsworth	96	54	76	...	0.79	.....
Harrison	92	58	74	...	0.32	.....
Hays	95	57	75	...	0.42	.....
Hutchinson	92	58	78	...	1.51	.....
Larned	93	53	74	...	1.97	.....
Jewell	..	..	..	...	0.02	.....
Lebanon	90	60	74	...	T	.....
Macksville	89	58	74	...	5.03	.....
McPherson	97	61	75	...	1.02	.....
Minneapolis	94	59	76	...	1.72	.....
Norwich	90	62	76	...	5.91	.....
Phillipsburg	99	56	76	...	1.23	.....
Republic	91	57	74	...	0.09	.....
Rome	94	59	..	...	4.35	.....
Russell	97	57	76	...	0.69	.....
Salina	96	56	76	...	2.57	.....
Wichita	91	63	76	—2	2.22	+1.42
Winfield	93	60	76	...	1.11	.....
Division	99	53	76	...	1.67	.....
EASTERN DIVISION.						
Agri. College	96	57	78	...	2.94	.....
Atchison	91	61	76	...	2.48	.....
Baker	91	60	76	...	0.25	.....
Burlington	93	60	78	...	0.14	.....
Emporia	91	60	76	...	1.19	.....
Eureka	..	..	..	...	0.01	.....
Fall River	89	61	76	...	0.20	.....
Fort Scott	94	61	78	...	0.53	.....
Frankfort	93	54	76	...	0.93	.....
Fredonia	92	60	76	...	0.08	.....
Garnett	94	60	76	...	0.87	.....
Grenola	92	60	76	...	0.53	.....
Horton	92	58	76	...	0.95	.....
Independence	95	63	79	...	0.60	.....
Iola	90	64	77	...	0.67	.....
Kansas City	91	67	78	+1	0.74	—0.17
Lebo	91	60	76	...	0.53	.....
Manhattan	95	56	76	...	2.62	.....
Olathe	90	61	75	...	2.86	.....
Osage City	94	58	76	...	1.00	.....
Ottawa	90	58	74	...	2.24	.....
Pleasanton	91	59	76	...	0.08	.....
Sedan	91	62	78	...	0.77	.....
Topeka	93	62	77	+1	5.58	+4.56
Valley Falls	90	56	74	...	0.44	.....
Division	96	54	76	...	1.17	.....
State	102	50	76	...	1.25	.....

*Record of last three days.

GENERAL SUMMARY.

In the eastern counties the average temperature for the week was one degree above normal. In the central counties it was normal, while in the western counties it was one degree below normal. The highest temperature was 102° at Coolidge and the lowest was 50° at Lakin and Wallace. The precipitation was very unevenly distributed. Only light showers fell in the southwestern counties, the central northern and many of the southeastern counties while good rains occurred in the northwestern and central counties and heavy rains in the central southern and the northeastern counties. Macksville reports 5.03 inches, Topeka 5.58, and Norwich 5.91 inches of rain. Farnsworth and Lebanon report a trace of rain. A destructive hailstorm occurred in Barton County on the 31st.

RAINFALL FOR WEEK ENDING AUGUST 4, 1906.



Decatur County Herd of Poland-Chinas

Fall boars all sold, am now booking orders for March and April pigs, sixty head to select from, also a choice lot of bred sows at farmers prices and a square deal guaranteed. Write me your wants.
R. H. Weir, Route 3, Oberlin, Kans.

Ward Brothers
Republic, Kans.

Spring Durocs for sale sired by Model H 37967, the best son of the great Higgins Model, also Shakespeare 3d, and other noted sires, also some fall boars that will be a credit to any herd. Write for prices.

Evergreen Herd of
Poland-Chinas

We have some fine spring pigs got by noted sires and out of sows that are as good as the best. Write us for breeding and prices.

J. A. Mosher, Rydal, Kansas

Fall Boars I have six fall boars for sale by Keep Coming, a son of the noted Keep On. These are not ordinary individuals but animals fit for herd headers. **O. B. SMITH & SON, Cuba, Kansas**

Duroc-Jerseys

Big, blocky, handsome boars of March and April farrow. Write
Buchanan Stock Farm, Sedalia, Missouri

STAADT'S DUROCS

Spring pigs for sale sired by Nelson's Model, the first prize winner at Neb. State Fair. Prices moderate and satisfaction guaranteed. J. F. Staadt, Ottawa, Kans.

Nemaha Valley Durocs

Young stock for sale sired by Young Grant 16331 A, Lewiston Top-Notcher 42961 and Happy Surprise 42847, and from sows of equal breeding. If you want this kind of breeding write me.
Wm. Brandon, Humboldt, Neb.

RENT PAYS FOR LAND

FERTILE SECTIONS OF THE SOUTHWEST, WHERE LAND SELLS FOR $15 AND RENTS FOR $5 PER ACRE

One of the remarkable things about Eastern Arkansas and Northern Louisiana is the fact that cleared land rents for $5 per acre cash, and can be bought for $7.50 to $15 per acre. It costs from $6 to $10 an acre to clear it. Other improvements necessary are slight and inexpensive.

The soil is rich alluvial, or made. It produces a bale of cotton per acre, worth $45 to $60. This accounts for its high rental value. Other crops, such as corn, small grains, grasses, vegetables and fruits thrive as well.

Alfalfa yields 4 to 6 cuttings, a ton to a cutting, and brings $10 to $16 per ton.

In other sections of these States, and in Texas as well, the rolling or hill-land is especially adapted to stock-raising and fruit-growing. Land is very cheap, $5 to $10 per acre; improved farms $10, $15, to $25 per acre.

The new White River country offers many opportunities for settlers. High, rolling, fine water—it is naturally adapted to stock- and fruit-raising. Can be bought as low as $3 per acre.

See this great country for yourself and pick out a location. Descriptive literature, with maps, free on request.

The Missouri Pacific-Iron Mountain System Lines sell reduced rate round-trip tickets on first and third Tuesdays of each month to points in the West and Southwest, good returning 21 days, with stop-overs. For descriptive literature, maps, time tables, etc., write to
H. C. TOWNSEND, G. P. & T. A., St. Louis, Mo.

of the pigs which are now being developed for his coming sales, because Mr. Jones says, "You must see their parents before you can appreciate the pigs." Mr. Jones always begins the inspection of the herd by calling Chief whose proper name is Fancy Chief No. 24923 and as he recites his breeding, you begin to appreciate why he stands at the head of this famous herd. Chief is by Ohio Chief the great World's Fair prize-winner of 1904, and whose history is well known to any one who breeds Duroc-Jerseys. Chief's dam is Col. M's Variety 2nd, a daughter of the great Orion 2nd and whose Dam is Col. M's Variety, the only sow in the world that ever defeated the sweepstakes sow, Lucy Wonder 6334A. While Chief has no show record, he is an animal of great quality and beauty and is producing pigs that would be a credit to the old Ohio Chief himself. The visitor is next shown Fancy Jumbo 17163, an animal of massive stature and whose breeding is just as great as his size, being by Jumbo Red 7973A by Protection 46978. Jumbo is an animal of great length and has one of the most perfect backs we ever saw; his legs are strong as mill-posts and he is heavily hammed; in fact we consider him one of the best sires in Mr. Jones' herd. We were then shown Fancy Topnotcher 40339, a son of the Famous Kant Be Beat and out of the great Dam Topnotcher Lass 78084. Our space is too limited to give half justice to this great animal, but suffice to say that a pig sired by him will go a long way in building up your herd. Then there is Fancy Improver 33257, a son of Improver 2nd and Dandy Orion 33879, who is being fitted for show purposes and is sure to not only win many ribbons but to be an attraction wherever he is shown; and last, but not least, is Prince Wonder 42465, a son of Missouri Wonder, the winner over all winners of four State fairs, at the Sioux City Interstate Fair 1903, and sweepstakes boar at Nebraska State Fair 1904. We were next shown the great brood sows of this herd, and to name and describe them would take more space and time than we can spare, but they are marvels for quality, beauty, and general conformity, all of them being of royal blood. At the head of them stands My Choice 50032, the great World's Fair prize-winner in four classes at this greatest of Duroc shows; Fancy Xenia 47490 by the great Topnotcher and Topnotcher Lass 71084, second prize-winner in the yearling class at the Ohio State Fair 1904. There are other sows in the herd just as good individuals and as well bred but we can not describe them at this time. It is enough to say that you can not name any noted animal but what Jones & Son can show you some of its blood in their herd. The one hundred and fifty pigs sired by these great herd-boars and out of these royal dams are in a healthy and growing condition, and looking over them you can see the stamp of their ancestors, which has been transplanted in them and which increases as they improve and grow day by day. Jones & Son look forward to their great fall and spring sales, when these animals fully matured and carrying the blood of the greatest Durocs of the land will pass into the hands of other breeders to multiply, and where their offspring will pour a constant stream of gold back into the pockets of their owners.

South St. Joseph Live-Stock Market.

So. St. Joseph, Mo., Aug. 6, 1906.

There is some encouragement for cattle sellers in the fact that the aggregate receipts today at six leading markets fell off 16,000 as compared with a week ago. It was clearly evident at the close of business last week that a reduction in supplies was necessary to any improvement from the unsatisfactory condition into which trade had settled. Today the local receipts were largely made up of westerns and southerns. The few native steers on offer sold readily at steady to strong prices although there was nothing strictly good here. Of the one thousand cattle which arrived about four hundred were western grassers and three hundred Texans. The market for these grass steers ruled very active with prices steady to firm. Westerns sold at $3.20@3.75 and Texans at $3.40@3.60. Best native steers here sold at $3.25. All classes of butcher stuff not an active demand at steady to strong prices but there was nothing of choice quality here. For the first time in about a month buyers were actually riding the yards in search of stock cattle today. The fall trade is now considered open and it looks safe to increase shipments of good yearlings and feeders. In a general way the cattle outlook seems to favor slightly better prices on coming days of the week.

Receipts of hogs fell off sharply in the total at leading points but the demand was bearish and prices at which the bulk of the local crop was moved were a shade lower than the close last week. It hardly looks probable at this time that there is likely to be any reliable reaction towards a higher level in the near future. It is a little early yet but it is still approaching the time of the year when packers attempt to shape prices for the opening of the regular packing season and after having hammered prices the way they have during the last three weeks and got the market in hand, it is not likely they will let it get away from them unless receipts should fall off to a minimum. Prices today ruled at $6.17@6.30 for bulk with the tops selling at $6.35.

Arrivals of 3500 sheep and lambs were all from the western ranges. The market for sheep was active and steady but the lamb trade showed a slow weak tone. Yearlings sold at $5.75, grass wethers at $4.75 and ewes at $4.60. Some feeding yearlings sold at $5.15 and ewes at $3.85. Warrick.

Kansas City Live-Stock Market.

Kansas City, Mo., Aug. 6, 1906.

Notwithstanding a decrease of 10,000 cattle last week, as compared with the week before, the market made only the nominal gain of 5 to 10 cents. Trade closed the week dull at that, but with a better clearance than at the end of the previous week, and killers also killed up closer, and therefore more likely to trade actively this week. The trouble with the market is the early appearance of unusual numbers of rangers at the northern markets. They are also extra good quality, 1200 to 1400 lbs., and come in competition with medium to good natives. Of course, this is a weakening influence here, although we get none of them. The supply today at all points is moderate, 11,000 head here, and the situation is stronger all around. Market is strong to 10c higher. Rains in the last day or two over certain dry districts have helped to keep down the supply to-day, by reviving the pastures therein. The same influence has been at work during a week or more in strengthening the demand for country grades of cattle. Supply of this class is still small, however, as branded cattle are scarce yet. Dry lot cattle are scarcer each week, a few last week at $6.00 to $6.10, balance of the dry lot cattle at $5.35 to $5.90, top to-day $5.90, heavy steers showing grass $5.00 to $5.40, straight grass steers $4.25 to $5.00 for the weighty kinds, light steers $3.25 to $4.00, medium to choice heifers $4.00 to $5.25, cows $2.50 to $3.75 mainly, bulls $2.15 to $3.50, canners $1.60 to $2.25, veals $3.75 to $5.50, stockers $2.25 to $3.75, feeders $3.40 to $4.35, stock cows and heifers $1.90 to $2.85.

Hog receipts exceeded 60,000 head last week, large run said to be due partly to many contract hogs being delivered at the end of July, besides the usual rush to market when a break occurs. Prices closed Saturday 10 cents above the lowest time, but 20 cents below previous Saturday. Run is 7000 head to-day, market strong with good light hogs, 160 to 180 lbs., selling at $6.35 to $6.40, price gradually lessening as weight increases or quality deteriorates down to $6.20 for medium to common packing or heavy weights. The supply last week was double that of corresponding week a year ago, during which week prices advanced 35 cents. Present prices are only 40 cents above a year ago.

Sheep supply was small last week, at 18,000 head, and there was little net change in values. Markets were called strong each day, but the week closed in about the same notch as close of last week. Supply to-day is 5000 head, market steady, spring lambs selling at $6.85 to $7.50, yearlings $5.25 to $5.75, wethers $4.75 to $5.25, ewes for slaughter $4.60 to $5.00, breeding ewes $4.50 to $5.25, feeding wethers $4.60 to $4.85, feeding lambs $5.50 to $6.00.

J. A. Rickart,

Kansas City Grain Market.

Wheat—No. 1 hard, 12 cars yellow 67c. No. 2 hard, 3 cars 69c, 3 cars 68¾c, 10 cars Turkey 68½c, 12 cars Turkey 68c, 5 cars 67¾c, 88 cars 67½c, 83 cars yellow and yellow mixed 67c, 1 car bulkhead 67c, 14 cars 66¾c. No. 3 hard, 1 car Turkey 68c, 1 car Turkey 67½c, 5 cars dark 67c, 27 cars 66½c, 13 cars 66⅛c, 28 cars 66c. No. 4 hard, 1 car 66½c, 11 cars 66c, 5 cars 65½c, 10 cars 65c, 5 cars 64½c, 5 cars 64c, 1 car bulkhead 64c. Rejected hard, 2 cars 65c, 2 cars smutty 64c, 1 car 64c, 1 car smutty 62c. No grade hard, 2 cars wheat and smelt 63½c, 2 cars 63c, 2 cars 62c. 1 car 61c. No. 1 red, 15 cars 68c, 2 cars 67¾c, 5 cars 67½c, 1 car 67c. No. 3 red, nominally 66½@67½c, 1 car 67½c, 5 cars 67c. No. 4 red, 3 cars 66c, 1 car 65½c, 1 car 65c. No grade red, 1 car 63c, 1 car 62c. No. 2 mixed, 2 cars 67c. No. 3 mixed, nominally 66@67c. No. 4 mixed, 1 car 64½c. No. 2 spring, 1 car dark 68c.

Corn—No. 2 mixed, 2 cars 47c, 14 cars 46¾c, 13 cars 46½c. No. 3 mixed, 1 car 46¾c, 3 cars 46½c, 3 cars 46¼c. No. 4 mixed, nominally 46@46½c. No grade mixed, 1 car 44c. No. 2 yellow, 3 cars 47½c, 2 cars 47c. No. 3 yellow, 2 cars 46¾c. No. 4 yellow, 1 car 46½c. No. 2 white, 5 cars 50c, 1 car 49½c, 7 cars 49¼c, 1 car nearly white 49c. No. 3 white, 1 car 49½c, 1 car 49c, 2 cars 48¾c, 1 car like sample 48c. No. 4 white, nominally 47½@48½c. No grade white, 1 car 45½c.

Oats—No. 2 mixed, nominally 31@32c. No 3 mixed, nominally 30½@31½c, 1 car red 31½c. No grade mixed, 1 car red 29½c. No. 2 white, nominally 34½@35½c for old. No. 3 white, nominally 33@34½c, 1 car old 34c, 1 car color new 33c. No. 4 white, nominally 31@32c.

Rye—No. 2 nominally 55@57c. No. 3 nominally 53@54c.

Barley—No. 3, nominally 37½@38c.

Flour—Demand fair and market steady. The quotations: Hard winter patents, $3.65@3.80; straight, $3.15@3.50; clears, $2.90@3.15; soft winter patents, $3.75@4.00; straights, $3.60@3.70; clears, $2.80@2.90.

Cornmeal—Slow sale but steady Country, $1.08 per cwt., sacked.

Corn Chop—Dull and weak. Country, 95c per cwt., sacked.

Bran—Firm and in fair demand. The quotations: Mixed feed, 68@69c; straight bran, 67@68c; shorts, 77@82c per cwt.

Flaxseed—Receipts, none; same time last year, none. Steady at 98c per bushel, upon the basis of pure.

Cottonseed Meal—At all points in Kansas and Missouri, taking Kansas City rates, $28.75 per ton in carlots.

Castor Beans—In carlots, $1.35 per bushel.

Ground Oil Cake—Carlots, $29; 2,000-pound lots, $30; 1,000-pound lots, $16; 100-pound lots $1.70.

Seed—Timothy, $2.30@3.00 per cwt.; red clover, $8.00@11.00 per cwt. alfalfa, $10.00@13.00 per cwt; cane, 95c@$1.00 per cwt., Kaffir corn, $1.05@1.15 per cwt.; millet, German, 95c@$1.00 per cwt.; common, 85@95c per cwt.; buckwheat, $1.25@1.40 per cwt.

Broom Corn—Choice green, self-working, $85.00. Good green, self-working, $80.00. Red tipped, self-working $85.00. Slightly tipped, self-working $75.00.

KANSAS FARMER.

Established in 1863.

Published every Thursday by the Kansas Farmer Co., Topeka, - - Kansas

SUBSCRIPTION PRICE: $1.00 A YEAR.

Entered at the Topeka, Kansas, postoffice as second-class matter.

ADVERTISING RATES.

Display advertising, 20 cents per line, agate (fourteen lines to the inch). Continuous orders, run f the paper, $1.82 per inch per week.

Special reading notices, 30 cents per line.

Special rates for breeders of pure-bred stock.

Special Want Column advertisements, 10 cents per line of seven words per week. Cash with the order.

Electros must have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

All new advertising orders intended for the current week should reach this office not later than Monday.

Change of copy for regular advertisment should reach this office not later than Saturday previous to publication.

Every advertiser will receive a copy of the paper free, during the publication of the advertisement.

Address all communications to

KANSAS FARMER CO.,

116 West Sixth Ave., - Topeka, Kans.

Special Want Column

"Wanted," "For Sale," "For Exchange," and small want or special advertisements for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than $1.00.

CATTLE.

SPECIAL SALE—5 straight Cruickshank Shorthorn bulls for sale at bargain prices for quality. H. W. McAfee, Topeka, Kans.

FOR SALE—Some good young Shorthorn bulls just a year old by the 2200 pound Marshall Abbotsburn 3rd 185305. Cheap, breeding and individual merit considered. D. Ballantyne & Son, Herrington, Kans.

FOR SALE—Registered Holstein-Friesian bull and nine females; also 40 head of choice cows and heifers, a few of them fresh now and the balance will come fresh in the fall. M. S. Babcock, Nortonville, Kans.

FOR SALE—The pure Cruickshank bull, Violet Prince No. 145647. Has been at the head of our herd as long as we could use him. An extra animal. H. W. McAfee, Topeka, Kans. 2 miles west of Kansas Ave. on Sixth street road.

FOR SALE—Registered Jersey cattle. Two yearling bulls. Sires—A son of Bessie Lewis, 32 lbs. butter 7 days, and "Financial Count" (imported); granddam held Island butter record 3 years. Sire's dam holds public milk record of 58 pounds daily, and his dam and Island winner in class for two years. Her four dams 22 to 26-quart cows, and all winners. Sayda Polo Jersey Farm, Parsons, Kansas.

REGISTERED GUERNSEY BULLS—Ready for service. Also pure-bred Scotch Collie puppies. Dr. J. W. Perkins, 422 Altman Bldg., Kansas City, Mo.

GALLOWAY BULLS—4 head, 16 to 18 months old, suitable for service. All registered. Address C. A. Kline, R. F. D., Tecumseh, Kans.

ABERDEEN-ANGUS CATTLE and Percheron horses. Stock for sale. Garret Hurst, breeder, Peck, Sedgwick County, Kans.

A BUTTER-BRED Holstein bull calf—The best purchase for grade dairy herd. See report Santa Fe Dairy Educational Special. Start right in your breeding. Sixty-five head to choose from. Geo. C. Mosher, Hillcrest Farm, Greenwood, Neb.

PEDIGREED SHORTHORN BULL 3 years old; sire Magenta, who cost $1,000 at 8 months. Cheap. S. J. Rentz, Leavenworth, Kans.

SEEDS AND PLANTS.

PURE KHARKOV SEED WHEAT—Yields 35 to 40 bushels per acre, tested 62 pounds per bushel. Three years from Russia, thoroughly acclimated. Matures early and perfectly hardy. Price in sacks, $1.25 per bushel, f. o. b., Richland, Kans. 600 bushels for sale. G. M. Kellam, 909 West 10th St., Topeka, Kans.

WANTED—When the season opens Kaffr corn, barley and millet in car lots. Parties who will have to sell please write. J. R. Young, Aberdeen, Miss.

FOR PRICES OF ALFALFA AND GRASS SEEDS for fal lsowing, ask The Barteldes Seed Company, at Lawrence, Kans.

KHARKOV SEED WHEAT—The new variety from Russia Matures early and perfectly hardy; yielded this year 35 to 40 bushels per acre. Price, sacked, f. o. b. Lawrence, $1.25 per bushel. Prices for larger quantities and samples on application. Have also Fultz, Harvest Queen, Harvest King, and Pearl's Prolific, soft, smooth varieties, at $1.10 per bushel, sacked f. o. b. Lawrence; seed rye at 75c per bushel, sacked, f. o. b. Lawrence. Kansas Seed House, Lawrence, Kans.

FOR PRICES OF ALFALFA AND GRASS SEEDS for fall sowing, ask The Barteldes Seed Company at Lawrence, Kans.

ONE DOLLAR will buy enough of McCauley's white seed corn to plant seven acres if you send to A. J. Nicholson, Manhattan, Kans.

HELP WANTED.

WANTED—Scotch farmer understanding practical farming in semi-arid climate and the care and finishing of live stock. Wages $50 a month, house and board. Wife expected to cook for farm hands. Answer H. S. Boice, Channing, Texas.

FARM and ranch hands furnished free. Western Employ Agency, 704 Kansas Ave., Topeka, Kans.

PATENTS.

J. A. ROSEN, PATENT ATTORNEY
618 Kansas Avenue. Topeka, Kansas

When writing advertisers please mention this paper.

REAL ESTATE.

FOR SALE—160 acre bottom farm, for $6,500. A fine river bottom farm, 2 miles from Glen Elder, Kansas, 25 acres good alfalfa, twelve acres fenced hog tight, a good house and rural free delivery. This is a rare bargain and will not be on the market long, so, if interested you should investigate at once. Possession given immediately. Crops go with the land. S. E. Hobart, Glen Elder, Kans.

FOR SALE—260 acre bottom land farm on Blue River, 25 acres alfalfa; good producing land; $50 per acre. Address Box 131, Irving, Kans.

HORSES AND MULES.

FOR SALE—34 head of good branded horses, stock about ⅔ brood mares with ten or a dozen foals at side, ⅓ young geldings unbroken. John O'Loughlin, Lakin, Kearney County, Kans.

FOR SALE—At reasonable prices, Black Imported Percheron stallions. E. N. Woodbury, Cawker City, Kans.

FOR SALE—One black team, 6 and 7 years old, weight 2,600 pounds. Mr. & Mrs. Henry Schrader, Wauneta, Kans.

LOST OR STRAYED—Brown mare, weight 1,100 pounds, white spot in forehead, barb wire cut on side, somewhat swaybacked. Suitable reward for return. J. W. Gillard, 836 Highland Ave., Topeka, Kans

AGENTS WANTED.

Wanted—Gentleman or lady with good reference, to travel by rail or with a rig, for a firm of $250,000 capital. Salary $1,072 per pear and expenses; salary paid weekly and expenses advanced. Address with stamp, Jos. A. Alexander, Topeka, Kans.

SWINE.

FOR SALE—20 good strong spring and yearling Berkshire boars that are just what the farmers want. Prices right. Address E. W. Melville, Eudora, Kansas.

SHEEP.

FOR SALE—5 Registered Dorset rams; especially noted for early maturity and fine mutton qualities; also a few full-blood and registered ewes. If taken soon, will sell cheap. J. L. Pancake, Tully, Kans.

MISCELLANEOUS.

FOR SALE, Aug 18, 1906, 2:30 P. M. at Public Auction at Lansing, Kansas. A slightly used electric light plant now in operation at Lansing, Kansas, is producing 136—16 C. P. lights, 2 cylinder Walrath gasoline engines with tank and switch board direct connection to 6 K. W. 220 volt Western Electric direct current generator. For further particulars address the President of the Company.

J. C. STONE,
Leavenworth, Kans.

OLD FEATHERS WANTED—You can sell your old feather beds, pillows, etc. to McEntire Bros., Topeka, Kansas. Write them for information and prices.

$35 PER DAY Salary or commission, taking orders for the greatest patented wonder of the age. Exclusive territory. Free samples to workers. Write at once. This is the chance of your lifetime. Minute Churn Co., 512, Cincinnati, O.

WANTED—100,000 subscribers for The American Farm Library, the great, 96-page magazine of information for progressive farmers and stockmen. Comprehensive, authentic, down-to-date. Each number a copyrighted, handsomely illustrated, completely indexed reference volume. Send 25 cents, (the price of a single copy), for trial year's subscription. The American Farm Library, Dept. D, Edgar, Neb.

HONEY—New crop. Write A. S. Parson, 403 S. 7th St., Rocky Ford, Colo.

6,000 FERRETS—Some yearlings, especially trained for rats. Book and circular free. Levi Farnsworth, New London, Ohio.

WANTED—Non-union molders. Call or write Topeka Foundry, 318 Jackson, Topeka, Kans.

DOGS AND BIRDS—For sale dogs, hogs, pigeons ferrets, Belgium-hares, all kinds; 8c 40-page illustrated catalogue. C. G. Lloydt, Sayre, Pa.

WANTED—A good second-hand grain separator. Dr. Barker, Chanute, Kansas.

WANTED—At once sound young men for firemen and brakemen on railways; high wages; promotion; experience unnecessary; instructions by mail at your home; hundreds of good positions now open. Write National Railway Training Association, 620 Paxton Block, Omaha, Neb.

EARN FROM $87.50 to as high as $155.50 per month. Wanted —400 young men and sound men of good habits to become brakemen and firemen. Big demand in Wyoming, Nebraska, Kansas, Colorado, and Missouri. Instructions sent by mail; stamp for reply. Northern Railway Correspondence School, Room 202 Skyes Block, Minneapolis, Minn.

SCOTCH COLLIE PUPS.

FOR SALE—Scotch Collie pups, from trained stock. Prices reasonable. Wm. Killough, Ottawa, Ks

SCOTCH COLLIE PUPS

Finest pedigreed stock in this country. Price, males, $25; females, $15.

JOHN C. HARMON, Topeka, Kansa

Stray List

Week Ending July 26.

Bourbon County—Chas E. Holstein, Clerk

MARE—Taken up by Wm. Alcorn in Scott tp., (P. O. Ft. Scott, Kans.), one bay mare, 15 hands high, 12 to 15 years old, wire cut on breast and badly cut on left hind leg; valued at $50.

Meade County—D. P. Wysong, Clerk.

MARE—Taken up by J. R. Gillick in Mertella tp. July 21, 1906, one black 4 year-old mare, weight 1,000 pounds, star in forenead, white hind feet; valued at $50.

For the Week Enging August 2.

Jackson County—N. P. McConnell, Clerk.

HEIFER—Taken up by S. E. Boan in Grant tp., July 25, 1906, one 1-year-old red white-faced heifer, split in left ear.

Week Ending August 9.

Johnson County—Roscoe Smith, Clerk.

PONY—Taken up by Joel Wells in Stanley, Kans. May 14, 1906, one 5-year-old bay pony, 30 branded on left hip; valued at $10.

When writing our advertisers please mention this paper.

Kansas Fairs in 1906.

Following is a list of fairs to be held in Kansas in 1906, their dates, locations, and secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

Allen County Agricultural Society—Frank E. Smith, secretary, Iola; September 25-28.

Barton County Fair Association—W. P. Feder, secretary, Great Bend; August 28-31.

Brown County—The Hiawatha Fair Association—Elliott Irvin, secretary; Hiawatha.

Butler County Fair Association—W. F. Benson, secretary, Eldorado; October 1-5.

Chautauqua County—Hewins Park and Fair Association—W. M. Jones, secretary, Cedar Vale; September 11-13.

Clay County Fair Association—Walter Puckey, secretary, Clay Center; September 4-7.

Clay County—Wakefield Agricultural Society—Eugene Elkins, secretary, Wakefield; first week in October.

Cloud County Fair Association—F. W. Daugherty, secretary, Concordia; September 25-28.

Coffey County Agricultural Association—S. D. Weaver, secretary, Burlingtin; September 18-1.

Cowley County—Eastern Cowley County Fair—J. M. Henderson, secretary, Burden; September 26-28.

Cowley County Agricultural and Live-Stock Association—W. J. Wilson, secretary, Winfield; October 9-12.

Dickinson County Fair Association: H. C. Wann, secretary, Abilene; October 2-5.

Elk County Agricultural Fair Association—E. M. Place, secretary, Grenola; September 19-21.

Finney County Agricultural Society—A. H. Warner, secretary, Garden City.

Franklin County Agricultural Society—Carey M. Porter, secretary, Ottawa; September 4-8.

Greenwood County Fair Association—C. H. Weiser, secretary, Eureka; August 14-17.

Harper County—Anthony Fair Association—L. G. Jennings, secretary, Anthony; August 7-10.

Harvey County Agricultural Society—J. T. Axtell, secretary, Newton; September 25-29.

Jefferson County Fair Association—G. A. Patterson, secretary, Oskaloosa; September 4-8.

Jewell County Agricultural Fair Association—Henry R. Honey, secretary, Mankato; September 18-21.

Linn County Fair Association—O. E. Haley, secretary, Mound City; September 11-14.

Marshall County Fair Association—R. W. Hemphill, secretary, Marysville; September 11-14.

McPherson County Agricultural Fair Association—E. S. Guymon, secretary, McPherson; September 4-9.

Miami County Agricultural and Mechanical Fair Association—W. H. Bradbury, secretary, Paola; August 22-25.

Mitchell County Agricultural Association—J. E. Tice, secretary, Beloit; last week in September.

Montgomery County—Coffeyville Fair and Park Asosciation—R. Y. Kennedy, secretary, Coffeyville; August 7-10.

Nemaha County Fair Association—V. B. Fisher, secretary, Seneca; August 29-31.

Neosho County—Chanute Fair and Improvement Association—A. E. Timpane, secretary, Chanute; August 28-31.

Ness County Agricultural Association—R. D. McKinley, secretary, Ness City; September 5-7.

Ness County—Utica Fair and Agricultural Association—R. C. Webster, Jr., secretary, Utica; August 30-September 1.

Norton County Agricultural Association—M. F. Garrity, secretary, Norton; August 28-31.

Osage County Fair Association—M. Carnaveaux, secretary, Burlingame; September 18-21.

Reno County—Central Kansas Fair Association—A. L. Sponsler, secretary, Hutchinson; September 17-23.

Republic County Agricultural Association—W. R. Wells, secretary, Belleville; September 11-14.

Rice County Agricultural and Live-Stock Association—F. L. Goodson, secretary, Sterling; August 1-3.

Riley County Agricultural Society—W. B. Craig, secretary, Riley; August 28-31.

Rooks County Fair Association—E. L. Williams, secretary, Stockton; September 18-21.

Shawnee County—Kansas Exposition Company—R. T. Kreipe, secretary, Topeka; September 10-15.

Sheridan County Agricultural Association: L. G. Taylor, secretary, Hoxie; September 11-14.

Smith County Fair Association—M. A. Dimond, secretary, Smith Center; August 21-24.

Stafford County Fair Association—P. O. Gray, secretary, St. John; August 22-24.

Sumner County—Mulvane Agricultural Association—Robt. P. Seyfer, secretary, Mulvane.

Wilson County—Fredonia Agricultural Association—V. L. Polson, secretary, Fredonia; August 21-24.

Leading Western Fairs and Live-Stock Shows for 1906.

August 24-31, Iowa State Fair, Des Moines.

August 30-September 7, Michigan State Fair, Detroit.

August 31-September 7, Nebraska State Fair, Lincoln.

September 3-7, Ohio State Fair, Columbus.

September 3-8, Minnesota State Fair, Hamline.

September 10-14, Colorado State Fair, Pueblo.

September 10-14, South Dakota State Fair, Huron.

September 10-14, West Michigan Fair, Grand Rapids.

September 10-14, Wisconsin State Fair, Milwaukee.

September 10-15, Interstate Fair, Sioux City, Iowa.

September 10-15, Kansas State Exposition, Topeka.

September 17-21, Kansas State Fair, Hutchinson.

September 17-22, Kentucky State Fair, Louisville.

September 24-29, Interstate Live Stock and Horse Show, St. Joseph, Mo.

September 28-October 5, Illinois State Fair, Springfield.

September 29-October 5, Missouri State Fair, Sedalia.

October 6-13, American Royal Live-Stock Show, Kansas City.

October 20-November 4, Texas State Fair, Dallas.

December 1-8, International Live-Stock Exposition, Chicago.

First published in The Kansas Farmer July 19, 1906.

Sheriff's Sale.

In the District Court of Shawnee County, State of Kansas.

William Prothrow, Plaintiff vs. Eugene F. Campbell, Mrs. Eugene F. Campbell, his wife, William Andrew Campbell, Mrs. William Andrew Campbell, his wife, John Campbell, Mrs. John Campbell, his wife, Albertus Campbell, Mrs. Albertus Campbell, his wife, Ida McGinniss, J. J. McGinniss, her husband, Josie Walker, A. E. Walker, her husband, Cora Henderson, —— Henderson, her husband, Josie Davis, —— Davis, her husband, and Margaret Campbell, a minor under fourteen years of age, defendents. Case No. 23403.

By virtue of an order of sale issued to me, out of said District Court, in the above-entitled action, I will, on Wednesday, the 22d day of August, 1906, at 10 o'clock a. m., of said day, at the east front door of the court house in the city of Topeka, in the County of Shawnee, in the State of Kansas, offer at public sale, and sell to the highest and best bidder, for cash in hand, all the following described real estate, to wit: lots numbered seven hundred and thirteen (713) and seven hundred and fifteen (715) on Buchanan Street in block eighteen (18) in Martin and Dennis addition to the City of Topeka, lying and situate in the County of Shawnee, in the State of Kansas. Said real estate has been appraised at $544.00 and must be sold for not less than two-thirds of said appraised valuation.

The above described real estate under a judgement of partition in the above action is directed by said order of sale to be sold, and will be sold to satisfy said order of sale.

A. T. LUCAS,
Sheriff of Shawnee County, Kansas.
By J. A. Ostrand, Deputy.

Whitcomb & Hamilton, Attorneys.

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Miles Medical Co., Elkhart, Ind

Santa Fe

Chicago and Return $10.40
on sale Aug. 4-5-6 first limit August 15th also on sale Aug. 11-12-13 first limit Aug. 22nd.

Minneapolis, Minn. and Return $10.80
Account Grand Army reunion, on sale August 11-12-13 first limit Sept. 1st, can be extended to leave Minneapolis as late as Sept. 30th.

St. Louis and Return $8.20
On Sale Aug. 4-5-6 first limit August 15th also on sale Aug 11-12-13 first limit Aug. 22nd.

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