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### What Constitutes Good Farming?

This question can be answered better after stating what is the result of good farming, namely: Getting the largest yield of the most profitable crops from the least area of earth in the shortest time and with the least expenditure of labor and money. Taking that statement as the standard of attainment, the object of good farming is seen to include necessarily the best methods of culture, and it as certainly involves the best materials, as to soil, machinery, implements, fertilizers, etc. To begin at the foundation, the soil must be made good and then it must be made best. Good soil, simply, is not enough; it must be improved and put in the best possible condition. When a farmer becomes convinced that he is not getting out of his land nearly as much as he ought to get; and when he sets about earnestly to learn the reasons for the failure, the first discovery, probably, that he will make is, that his soil is not in first-class condition. It yields from thirty to fifty bushels of corn to the acre when it ought to produce twice as much, and that as to all other crops the same condition exists; his stock does not sell in the open market as well as better animals of the same class would; he is not getting as much milk and butter as the best animals of the best breeds would produce, and his poultry brings but little profit. And so he reasons along the line of his farm products, and falls back to the soil as the beginning point.

And that is the proper place to begin. Started there he is started right. Beginning with the improvement of the soil, he lays the foundation for all that is to come as the superstructure. When a man wants to build only a shanty, he does not care much about a foundation; but when he expects to erect a large and substantial structure, he is very particular about where and how he places the first stones. In building the State house in Topeka, the workmen went down twenty-five feet to the solid rock, and there laid the great foundation stones in cement so as to have them lie supported at every point of their under surface. They are expected to bear up an immense structure. So with the good farmer as to his soil. That is the first thing to be attended to. With good soil in the best condition, good culture will insure good crops.

It may be that when the soil is examined it will be found naturally "thin," and it will have to be made rich by work. With some grades of land a man is better off without any. He would make money by abandoning it and going where good land can be had for the taking. There is very little land in Kansas, however, that cannot be advantageously improved. The first step is to pass a resolution to work less ground and do it better. Then adopt a rotation system, and immediately begin to sow grass seed, red clover as much as can be well handled. Also arrange to sow rye and buckwheat, not always nor generally for pasture or for grain, but for manure, to be plowed under green. Cut up every stalk of corn and make manure of all waste fodder, straw, hay, etc. Arrange to cut up fine all the cornstalks that are used for feed; steam them, or cook them, when it can be done, at any rate cut them, mix wheat bran, millstuff, oil cake, etc., with them wet, and feed in that way, and confine the manure yard to small spaces where all the rain water that falls above it may do good. In short, set about a systematic plan of making the best manure and of getting it

onto and into the ground. There is no better fertilizer than well-rotted barnyard manure. Wood ashes, leaf mold, rotten wood, chip dirt, sawdust—all these are good and ought to be used; but the mainstay of the farmer in the matter of fertilization is his barnyard. With heavy manuring from that source, and with all the growing vegetable matter that can be spared plowed under, with draining and deep, deep plowing and perfect pulverization, almost any piece of land in Kansas, if free from rock near the surface, can be made rich enough to produce onions as well as corn.

Kansas farmers quite generally work over too much ground, and one of the usual results of that kind of farming is carelessness in regard to the enrichment of the soil. But it is not good farming. It neglects the most important matters, it ignores essentials. One acre of land in the best condition will produce a hundred bushels of corn or oats, fifty bushels of wheat, four tons of timothy or clover, fifteen tons of sorghum fodder, or twenty tons of sorghum cane for sugar; it will produce enough of grass, grain and roots to keep one cow or horse; it will yield a net return every year fully equal to its value, even though it be within close range of a city and is used exclusively for gardening. The good farmer must put his ground in good condition the first thing. That is vital. It will pay him a thousand-fold. Better work ten acres and make ten hundred dollars, than to work fifty acres and make no more. The saving of labor, the saving of outlay in many ways, and the increase of production by working rich land in place of poor land is so great that no good farmer can afford to overlook it.

### Industrial Difficulties.

#### Kansas Farmer:

The government has been making thorough investigations for some time in regard to the general industrial depression of 1882-86. Having patiently collected a mass of facts and statistics and made laborious calculations and comparisons, it has been found that there exists one hundred and thirty-eight rational causes for the recent stagnation. This long list, under analysis, may be divided into three great classes. First, direct causes, which include, for example, over-production, influence of machinery, failure of the wage system, consolidation of wealth, crippling of the consumptive power, etc. Second, contributory causes, such as transportation, distribution, exchanges, commercial systems, etc. Third, indirect, remote and trivial causes.

Examining the first leading cause mentioned—over-production, it appears that the United States, Great Britain, France, Germany and Belgium produce more than enough manufactured articles to supply the whole world by running their factories only part of the time. This is enough to prove that there actually exists a supply greater than the demand. Since thousands of people are in daily want of proper food and clothing, it must follow that the prices asked for manufactured articles are too high, or the people too poor, or both.

The prime cause of over-production is the influence of machinery under the management of those who are eager to acquire wealth rapidly without the proper regard for the welfare of others engaged in other enterprises. The concentration of capital is too often managed by a few individuals with selfish ends in view, and in total disregard

of the demand, the supply of which should be the ruling motive.

There are two aspects to the machinery question. First, the great rapidity with which raw material is worked by this means results directly in over-production. Second, on account of machinery doing work formerly requiring many men, a displacement of labor follows, ranging from 17 to 80 per cent. in the various branches of industry. A notable example of this is the work now done by the National Transit Company, controlled by the Standard Oil Company. Their pipe lines have displaced 5,700 teams and double that number of men.

There are in the United States at the present time 28,600 locomotives. To do the work that has been done by them the past year would require 54,000,000 horses and 13,500,000 men. This work as now done requires only 250,000 men. In round numbers, the cost of operating the railroads of the past year is \$502,600,000; by using horses and men to do the work they have accomplished, it would cost more than \$11,308,500,000. The operating machinery in this country is equal to 3,500,000 horse power; supposing men were employed to furnish this power, it would require 21,000,000 men, representing a population of 105,000,000. The industries are now carried on by 4,000,000 men, representing a population of only 20,000,000. In the manufacture of boots and shoes in the Eastern States it would require 500 persons to make as many boots and shoes by hand as 100 persons now make in the same length of time by machinery, a displacement of 80 per cent. While this great displacement of labor has oppressed the workmen, they have also been crowded by an average annual immigration of 575,511 persons, only 11 per cent. of whom have engaged in agriculture. The unjust practices of many employers have rendered the management of the wage system harassing to both capitalist and laborer, and in many establishments it has been abandoned for the true principles of co-operation, involving profit-sharing. All of these leading causes named, and many more besides, have crippled the consumptive power. Suppose that over-production, with its results, necessitates the non-employment of one million men at one dollar a day. The consumptive power of the country will be one million dollars a day less than if these men were employed; since they are consumers, and have been deprived of just that much power as such. To remedy these existing evils organization is necessary. It has already commenced. It is gaining ground. Its principles are working out in manufacturing concerns in different countries, and in one railroad company in the United States. But these principles of co-operation are not confined to any one branch of industry. People engaged in any occupation, trade or profession always find it profitable to combine themselves, on correct principles, for business purposes. Perhaps the agricultural population of the world co-operate the least, and yet in no other occupation could individuals be of more service to each other, if rightly organized. These principles applied to the farmer is a theme of itself. The years of 1885-86 were noted for organizing labor. Numbers of establishments organized on a co-operative basis and are still prosperous. Not a failure has been recorded of any that were correctly formed. The result upon the aggregate failures of the United States may be seen at a glance. In 1884 the total number of failures was 10,968; total liabilities,

\$226,343,427. In 1885, total number of failures, 10,637; total liabilities, \$124,220,321. The decrease in number was small, but the total liabilities for 1884 were nearly double that of 1885. A co-operative firm is safer in a panic, because each workman in it is concerned financially and has a voice in the management. A band of persons having the same object in view has a greater chance for prosperity than an establishment full of discontent and mutiny. SAM WINDER.

### Following the Same Rounds.

#### Kansas Farmer:

We often hear the complaint that it is difficult to induce farmers to make any change. Much of this is no doubt due to habit. We get into the habit of one system of work and follow it until it becomes so well fixed that it is difficult to make a change. How often will we see a farmer who for years has followed the same routine, it may be the same that his father followed, and he, from mere force of habit, without any good or sufficient reason that he can give, follows the same plan. By some accident (we may term it) he purchases a fine hog or cow, or a new variety of poultry, and for a time he gives it the best of attention; but in a short time he gradually falls back into the old plan. So with many new plans of improvement; he will often make a start, but the old habit is too strong, and he gradually falls back into the old plan. At best, much of the labor of the farm is routine work. We feed in the morning; work until noon, feed again; work until night, feed again; go to bed at night and get up in the morning and go through the same round of work. The year's work is much the same; commencing in the spring we sow oats and grass, plant corn, potatoes and other crops, and then cultivate until harvest; this over we plow again until time to sow wheat; then the corn must be gathered and the stock cared for, only to wait until spring comes again, and the same round is commenced again. It is scarcely to be wondered at that we fall into the habit of doing our work after the same plan each year, and that the habit once established it is difficult to make a change.

Generally the best argument is money or profit. Once thoroughly satisfied that better stock or different methods of farming will give a larger per cent. of profit, and you offer an inducement that may lead to a change. Yet from the very nature of the case it will require strong proof to be sufficiently convincing to induce the change; and in some respects it is perhaps better so, for the reason that the farmer will not find it profitable to be continually changing. He cannot afford to run the risk unless he has good reasons to believe that the change will be for the best. That by making the change he can increase his profits, and that, too, without too much of an increase in the expense, either in the plan or in making the change. And it will not always answer to make a change until sufficient evidence is presented to show that it is for the best. But whenever this is the case we should not allow prejudice or habit to deter us from making any reasonable changes that will increase our profits. N. J. SHEPHERD.

Eldon, Miller Co., Mo.

It is not good policy to dry hay to brittleness before drawing it from the meadow, for that causes waste in handling and reduces quality. Grass is well cured when it will rattle lightly in the handling, and then is the time to store it.

## The Stock Interest.

### DATES CLAIMED FOR STOCK SALES.

JUNE 21.—W. S. White, Short-horns, Sabetha, Kas.  
 JUNE 30.—A. H. Lackey & Son, Short-horns, Peabody, Kas.

#### Sorghum as Food for Animals.

The value of sorghum as feed for domestic animals has not yet been understood by most farmers. It appears from the reports we published last week that more ground will be devoted to sorghum this year than ever before, and we regard the fact as a very good sign. In our own personal experience we never found a plant that equaled sorghum for feed. The experience of some farmers in Kansas, those who have thoroughly tested its properties, agree with our own. It is a cheap food, too, costing but little to raise it, and it is peculiarly well adapted to Kansas soil and climate. Other kinds of forage are required in connection with it and some grain feed, particularly ground feed, as wheat bran, mill stuff, corn and cob meal, chopped rye and oats, oil cake, etc. But sorghum can be made and, as it looks to us, ought to be made, the principal forage crop on every Kansas farm.

Some of the most successful farmers of the State have tested this plant in different ways, and those who have had most experience with it and who are for that reason best informed as to its advantages, are most positive in their favorable opinions. Colonel St. Clair, of Sumner county, H. A. Ensign, of Cowley, W. J. Colvin, of Pawnee, and several others whose names we do not just now recall, have given our readers much valuable information concerning sorghum as animal food, methods of growing, cutting, curing, feeding, etc. Mr. Ensign prepared an article recently on the subject and it was printed in the *Breeder's Gazette*, Chicago. In that article he gives some important facts coming under his own observation in an experience of seven consecutive years. The experience of the first four years of the seven was not altogether satisfactory, because, as was found later, he had not learned the best method of handling the plant. But, he says—

Commencing with the spring of 1883, I broke up ten acres of sod ground. The soil was sandy loam. About May 10 I went over it thoroughly with a sod-cutter, after which I sowed the piece to Amber cane, putting on one and one-eighth bushels of seed per acre. In a brief period of time I was rewarded by an excellent stand of sorghum, which grew rapidly, notwithstanding the latter part of May and a portion of June were quite dry. About July 20 the heads began to show. Having learned from experience that this was the best time to cut the crop, I put the mowing machine into it, cutting five acres, leaving the remainder to stand a few days until I could handle it. At this juncture my sorghum stood about seven feet high, and was as thick as the ground could hold. For three days after cutting my sorghum there was very little sun. The weather was damp and shewery, so that I was not able to rake it into windrows for some ten days, when it remained for several days longer to dry out. In the meantime the balance of the piece was cut and put in process of curing. When my crop had become thoroughly dried out it was put away, and I found that I had eighty-seven and a half tons of as good winter feed as one could ask for, which, with the addition of nine tons of prairie hay, three tons of millet, and the cornstalks off of eight acres of ground, furnished the rough feed for seventy-two head of cattle, nine head of horses, and forty-one Cotswold sheep for that winter, and my stock never came through a winter in better condition.

Mr. Ensign, having tested several varieties of cane, favors the Amber. It is sweeter, he says, comes earlier, will stand thicker on the ground, handles easier, and feeds better than the larger varieties.

Cutting cane at the stage recommended for fodder, necessarily prevents ripening of seed; hence it is necessary to have good seed from another source, and it is better for every farmer to raise his own seed. A small piece of ground

is sufficient for this purpose. An acre of good cane will have from ten to fifteen bushels of seed. For best results in this direction the seed may be planted, and the plants cultivated just the same as is done in the case of corn. The plants may be grown in drilled rows, one stock every foot, or they may be grown in hills with three or four stalks to the hill. It ought not to grow (for seed) near corn or broom corn, for it is easily deteriorated by mixing in that way. However the seed is obtained, it ought to be tested before sowing.

Mr. Ensign, detailing his experience, further, with the ten-acre field above referred to, says the second growth furnished abundance of good pasture for twenty-four milch cows from September 1, over two months, and until frost came. The only unusual precautions observed were to let them feed only a short time upon the pasture at first, fearing they might bloat themselves, and during the whole pasture season the cows were turned off after filling themselves, in order that they should not waste the feed by treading it under foot. That ten acres of sorghum not only furnished eighty-seven and a half tons of most excellent winter fodder, much superior to prairie hay, especially for milk purposes, but it also furnished pasture for twenty-four cows for over two months, until frost came, when the native grasses were thoroughly dried out, keeping the cows in full flow of rich milk.

His experience the next year was equally encouraging, but instead of pasturing the second year he mowed it, giving him two crops of fodder, amounting in the aggregate to over thirteen tons of cured fodder per acre, the last cutting affording the best feed. Last year, he sowed twelve acres of second sod to sorghum. Six acres for some reason did not come up well, and for this reason did not furnish so good feed or so much of it. The other six acres stood well, and yielded about as large a crop as former seasons.

The season is not too far advanced yet for the growing of sorghum for fodder. Indeed, a good crop may be grown on wheat stubble where the wheat is cut and removed early. May sowing is doubtless better, though any time in June will do if the ground is in good condition. In case of late sowing, the seed ought to be soaked in warm water forty-eight hours before sowing.

#### Artichokes for Hogs.

This vegetable never was much grown in Kansas, but it is good hog feed, and it may be well enough to call attention to it. Artichokes are planted and raised about like potatoes, and when they are planted "good," they stay planted a long time. It is their staying properties which do most offend some farmers. They can be destroyed, however, with little trouble, by careful and positive treatment. We have just read an artichoke article in an exchange which credits it to the *Montana Live Stock Journal*. That paper believes in artichokes for swine. It says they are perfectly hardy, as nutritious as potatoes, and hogs can root them out for themselves, once a plantation is established, whenever the ground is not frozen. In the autumn and spring, and during the winter, they are especially grateful.

We have not found them "the best hog food known," nor that an acre as ordinarily grown "will keep from twenty to thirty head in fine condition from October until April, except when the ground is frozen too hard for them to root," as stated by a contemporary. Neither may they be depended upon for fattening. But there is no better supplementary food outside the season of

grass, or one so easily managed as artichokes.

The seed may be cut to single eyes and planted in rows four feet apart by twelve inches in the row. Keep down the weeds the first year by cultivation. The second season the area may be definitely extended from the tubers gathered, leaving plenty for seed in the original patch. Thereafter if the patch is not too seriously rooted up, the artichoke field will last indefinitely. Good bottom land that is well drained is the best soil for the crop. Next, any friable rich loam. Ten to fifteen hogs may be kept on this acre during the season when there is no grass. The hogs will be healthy and but little corn will be required, except during the season of fattening. The man, however, who expects to keep hogs exclusively on an artichoke diet, will find himself as sadly wrong as those who give such advice.

#### The Parts That Pay.

During a visit, a number of years ago, to New York Mills, and the home of the late Senator Campbell, the famous Short-horn breeder, I was shown by Richard Gibson, the gentlemanly foreman, a number of young cattle recently imported from England and selected there by Mr. Gibson.

Wishing to learn something—a good trait even in these wise times—I asked Mr. Gibson to kindly point out where these cattle were superior to the others on the farm. "Where the beef is the most valuable," he replied, and proceeded to show me the wide and full loins, the level backs and full, deep hams. He did not dilate about the size of the horns, the length of the tail or the muzzle. These were evidently, in his mind, subordinate points, and of no consequence compared to the points where the money was. He did not stop to say anything about the ears or to note any twists or curls in the hair. Well, I learned something, to-wit: that the true scope of the breeder is to increase the useful and the valuable with his animals. I spent more than a quarter of a century chasing the ideal beauty, or its phantom, in making my Victoria hogs. It did become a reality in form, but not a satisfaction. Profit in hogs does not rest in mere beauty. A stub nose may be handsomer than one longer, and a little upright ear may be prettier than one with a graceful turn forward and down, but there is, I find, more pork, and that of a better quality, in hogs which have snouts of moderate length, for behind this nose there is a long body. This is the kind of hog to build upon. Let the snout alone. It gives more latitude or foundation for big jowls. Pile thereon the jowls and run them back so that they will almost touch the shoulders. Make the back, its whole length, broad and flat, with the ribs bulging out like a barrel. This broad, wide back is the place for lean meat. I have had hogs measure through the back five inches of lean, to four inches of fat—nine in all. This should be the proportion. A broad, level-backed hog is filled out good behind the hips, and there extra ham is stored. Such a hog is broad behind and the hams are thicker. Next, round them out behind as much as possible, and carry them down to the feet. This is my style of a hog. When we get behind them we think mighty little of the inch or two of snout, and whether their ears come to a point up, or a curve down. Twaddle talk about hogs amounts to very little.

I like types, and to have them fixed. My standard is a uniform color, and that the most attractive. There is also a difference in the disposition of families of hogs. My Broad-back family are all saints in gentleness, and then I have

had families where ugliness at pig time was casual. Such families should grow less. Amiability then is one of my cardinal virtues in a hog. Some people think that a deep-sided hog will cut more side pork. They do have this appearance, but they do not measure more in girth than a hog with a broad back and well-sprung ribs. The last characteristic I think important, as it gives more space for the heart and lungs. A narrow, flat-sided hog, like the old Jersey Reds, does not have space enough for the play of the pulmonary organs. The body should be long, as this gives plenty of room for the pulmonary organs, the stomach and bowels, and in sows for the enlargement of the uterus. This provides for more pigs and those of larger size. A short-bodied sow, especially if fat, is inactive, as the diaphragm is pressed by the stomach against the lungs and their action, and that of the heart, is impeded. They are short-winded, and do not like to travel about, and consequently must be waited upon. My notion of a hog is one with such a length of body that nothing is cramped and there is room to let. Such a hog will go about and hunt for food and not be so particular about its fine quality.

The legs are important, and the bone. First the bone. The rage has been "fine bone." Is not this a mistake? It depends on the quality of the bone. Fine-boned for want of bone, or corn-bone, will not do. Such hogs will get lame, have broken legs with the slightest cause, get smothered in transit, and are weak. Fine-boned, in the sense of the Kentucky thoroughbred, is all right. This is perfect bone, small, fine, heavy, solid and strong. A hog brought up on grass, bran and middlings as the principal food, will have such bone. Of the extremes give me good bone, medium at least.—F. D. Curtis, in *The Hog*.

Under like conditions young animals make greater gain, in proportion to food eaten, than those that are fully matured.

A properly matured animal must have its system built up evenly. What should be aimed at is a large frame and strong muscle, and the young stock should be fed with this object in view.

*Itch, Prairie Mange, and Scratches* of every kind cured in thirty minutes by *Woolford's Sanitary Lotion*. Use no other. This never fails. Sold by Swift & Holliday, druggists, Topeka, Kas.

A New York dairyman obtains fodder from sowed corn which cows prefer to the best hay, by planting the corn in drills three feet apart, so that the sun and the plow could get between the rows. Corn sowed so close it cannot be worked, he took no stock in.

#### Short-horn Bulls for Sale.

A number of choice young thoroughbred Short-horn bulls for sale at low prices and on satisfactory terms to purchasers. Address, at once, J. B. McAFEE, Topeka, Kas.

#### Are You Going South?

If so, it is of great importance to you to be fully informed as to the cheapest, most direct and most pleasant route. You will wish to purchase your ticket via the route that will subject you to no delays, and by which through trains are run. Before you start, you should provide yourself with a map and time table of the Gulf Route (Kansas City, Ft. Scott & Gulf R. R.), the only direct route from and via Kansas City to all points in Eastern and Southern Kansas, Southwest Missouri, and Texas. Practically the only route from the West to all Southern cities. Entire trains with Pullman Palace Sleeping Cars, and Free Reclining Chair Cars, Kansas City to Memphis; through Sleeping Car, Kansas City to New Orleans. No change of cars of any class, Kansas City to Chattanooga, Knoxville and Bristol, Tenn. This is the direct route, and many miles the shortest line to Little Rock, Hot Springs, Eureka Springs, Fort Smith, Van Buren, Fayetteville, and all points in Arkansas. Send for a large map. Send for a copy of our "Missouri and Kansas Farmer," an 8-page illustrated paper, containing full and reliable information in relation to the great States of Missouri and Kansas. Issued monthly and mailed free. Address, J. E. LOCKWOOD, G. P. & T. A., Kansas City.

# The Poultry Yard.

## The Peahen.

The peahen lays her eggs in the most out-of-the-way place she can find, and if you should discover her nest, do not disturb it or meddle with the eggs. Let them alone, and when the hen has laid her litter out she will set, just as any other hen would, and at the end of four weeks she will probably bring off a good-sized brood, some of which will probably live to "grow up." For the first fortnight the chicks should be fed and treated like young turkeys, i. e., if you can find them, and can get them where you can "treat;" for usually the hens will not lead their young near the buildings until they are some weeks old. In that case you will have to leave them to the "tender mercies" of the mothers; and perhaps that is just as well, for the peahen is a good mother, and will probably raise all of her children that can be raised. The peahen does not wear her chicks until they are about six months old; and until they moult at eighteen months old, the males and females look about alike. Then the male begins to grow his train, but does not reach his full size and beauty until the third year.—*Prairie Farmer.*

## Dust Bath for Fowls.

Nearly, if not quite, all species of land birds use the dust bath. They choose a spot of fine dry soil, and scrape little holes where they pulverize the dirt until it is reduced to a fine dust. In this place they roll and shake their feathers, and allow the dust to penetrate to the skin. It appears that in some way this is deleterious to the parasites which infest the plumage or the skin. It has been said by some naturalists that as all insects breathe, not through the mouth as warm-blooded animals do, but through little openings in the skin situated in rows along the side of the body, the fine particles of dust close these openings, so that the parasites die of suffocation as quickly as quadrupeds would if held under water. This has been denied by other scientists, who say that these holes are defended by a very delicate but effective apparatus that makes it impossible for any foreign matter to enter, no matter how minute it may be. Be this as it may, we know that wild fowls take dust baths whenever the weather and the state of the soil permit. Nature is a good guide, and whether the dust bath is for the prevention and absorption of effete matter which has become too odorous, or whether it acts as an insecticide, it is certainly advantageous to fowls, or they would not use it.

Therefore, the careful poultry-keeper will provide boxes or bins filled with fine road dust, coal ashes, sandy loam or pure loam, or fine clay thoroughly dried and pulverized. It makes but little difference which of these varieties of soil are used. The principal thing is to have it clean; that is, not a highly-manured soil, but a comparatively unfertile one is preferable. Subsoil will do very well. The next qualification is that it must be perfectly dry, and one other qualification is that it must be very thoroughly pulverized. The best place to locate the dust bath is just inside the south or east windows, where the fowls may enjoy the health-giving rays of the sun, and where the dust in the bin will be most apt to be kept thoroughly dry.—*American Poultry Yard.*

Warmth and good feeding are productive of eggs and profit. Warm food given each morning stimulates the hens to lay eggs. A mess of small potatoes baked in the oven as soon as the break-

fast has been prepared, and given hot, will be very acceptable and will cause the hens to sing their morning lays. Early layers will be early brooders and a warm corner should be provided for the hens to make their nests in. Glass-covered coops are useful for early broods. Young chicks need but little food at first, but this should be the most nutritious. Crushed wheat is excellent for them. It can be coarsely-ground in a coffeemill and an ounce is sufficient for a day's feeding for a whole brood. This food is placed out of the reach of the hen, which can have other and less costly food. Warm scalded bran is also good food for young chicks and is also egg-compelling food for the hens. The common vice of the season, viz., egg-eating, is avoided by giving the hens warm food and plenty of crushed fresh bones, procured from the butcher. The soft rib bones, which contain much vascular tissue, make the best for this use. Some chopped cabbage, turnips or apples will also be useful.—*Rural New Yorker.*

## Poultry Notes.

Coarse bones in fowls indicate coarse meat. A coarse-meated fowl is a poor thing side of a fine, juicy-meated one.

For lice, dust Persian insect powder freely into every crack and crevice, and on the bodies of the hens, in among the feathers.

Gather the droppings around under the roosts every two or three days, if you would have your poultry free from the scourge of scaly legs.

When cleaning the perches in the poultry house it is necessary to apply the mixture of kerosene oil and grease to the under side as well as the top.

About one-third of the weight of an egg is solid nutriment. This is more than can be said of meat. There are no bones and tough pieces to have to be laid aside.

No one can keep fowls profitably covered with vermin, or surrounded by filth. The first consideration is health, the next cleanliness, warmth, ventilation, variety of food.

Geese can be fattened on any kind of grain, if you feed all they will eat, commencing about ten days before you wish to market them; but corn, peas or barley have the preference.

If lousy hens did not lay there would be but few eggs in the market. But it is very certain that hens that are entirely clean and free from this evil will lay a great deal more than those afflicted with vermin.

Beware of using too much carbolic acid on poultry; unless the individual is accustomed to using it, he is more apt to kill than cure. Better to keep the chickens healthy by keeping them dry in coops out on clean ground, with good feed and clean water. Care, caution and common sense will raise more chickens than all the remedies combined.

If you have any doubt about the setting hens being free from lice, dust them while on the nest with pyrethrum powder. Use plenty of it. When the hen is off taking her daily meal, dust the nest with a handful of air-slaked lime. After you have done this, put the eggs in a basket and beat the nest lightly with a stick. Thus the lime will penetrate to every part of it. The lime should have been put in when the nest was made.

In large sections of the country physicians find most of their work in fighting Malaria, because nearly every disorder of the system has its beginning in the presence of this subtle poison in the blood. Dr. Shallenberger's Pills never fail to eradicate every vestige of it, and never do harm. Use them and save time, much suffering and a doctor's bill.

# BREEDERS' DIRECTORY.

Cards of three lines or less, will be inserted in the Breeders' Directory for \$10.00 per year, or \$5.00 for six months; each additional line, \$2.00 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

## HORSES.

**PROSPECT FARM.**—H. W. McAfee, Topeka, Kas., breeder of Thoroughbred CLEVELAND HORSES and SHORT-HORN CATTLE. A number of choice bulls, also horses for sale now. Write or call.

**M. D. COVELL,** Wellington, Kas., fifteen years an importer and breeder of Stud Book Registered Percherons. Acclimated animals of all ages, both sexes, for sale.

## CATTLE.

**T. M. MARCY & SON,** Wakarusa, Kas., have for sale Registered yearling Short-horn Bulls and Heifers. Breeding herd of 100 head. Carload lots a specialty. Come and see.

**JERSEY CATTLE.**—A. J. C. C. Jersey Cattle, of noted butter families. Family cows and young stock of either sex for sale. Send for catalogue. C. W. Talmadge, Council Grove, Kas.

**W. M. BROWN,** Lawrence, Kas., breeder of A. J. C. C. Jersey and Holstein-Friesian Cattle. Stock for sale. Bulls, \$50 to \$100; Heifers and Cows, \$50 to \$150. Send for catalogue.

**H. H. DAVIDSON,** Wellington, Kas., breeder of H. Polled Angus and Galloway Cattle. The largest herd in the State. Choice stock for sale at all times. Correspondence and orders solicited.

**F. R. FOSTER & SONS,** Topeka, Kas., breeders of HEREFORDS. Bulls for sale.

**OAKWOOD HERD OF SHORT-HORN CATTLE.**—All recorded. Choice-bred animals for sale. Prices low. Terms easy. Imported Earl of Gloster 74523 heads herd. C. S. Elcholtz, Box 1208, Wichita, Kas.

**F. McHARDY,** breeder and importer of GALLOWAY Cattle, Emporia, Kas. Young stock for sale at reasonable prices. Liberal credit given if desired. Mention KANSAS FARMER.

**WARREN, SEXTON & OFFORD,** Maple Hill, Kas., importers of Thoroughbred RED POLLED CATTLE. Bulls and heifers for sale. Railroad station, St. Marys.

**D. H. FORBES,** 198 Kansas avenue, Topeka, Kas., breeder of Short-horn Cattle. Six head of Bulls, from 7 months to 3 years old, for sale now on easy terms.

**DR. W. H. H. CUNDIFF,** Pleasant Hill, Mo., proprietor of **ALTAHAM HERD** and breeder of fashionable Short-horns. Straight Rose of Sharon bull at head of herd. Fine show bulls and other stock for sale.

**GUERNSEYS.**—Elm Park Place, Lawrence Kas. L. Bullene, dealer in registered Guernsey Cattle. Young stock for sale. Telephone connection to farm.

**J. S. GOODRICH,** Goodrich, Kas., breeder of Thoroughbred and Grade Galloway Cattle. Thoroughbred and half-blood Bulls for sale. Sixty High-grade Cows with calf. Correspondence invited.

## CATTLE AND SWINE.

**H. S. FILLMORE,** Lawrence, Kas., proprietor of Green Lawn Fruit and Stock Place, breeder of Jersey Cattle and Poland-China Swine. Stock for sale.

**M. H. ALBERTY,** Cherokee, Kas., breeder of Registered Holstein-Friesian Cattle and Poland-China Swine. Also Pekin Ducks, Wyandotte and Plymouth Rock fowls. Stock and eggs for sale.

**C. H. HOLMES & CO.,** Grinnell, Iowa, breeders of Jersey Cattle and Duroc Jersey Swine. Prices to suit the times. Send for catalogue.

**PLATTE VIEW HERD.**—Of Thoroughbred Short-horn Cattle, Chester White and Berkshire Hogs. Address E. M. Finney & Co., Box 790, Fremont, Neb.

**ROME PARK STOCK FARM.**—T. A. Hubbard, Wellington, Kas., breeder of high-grade Short-horn Cattle. By car lot or single. Also breeder of Poland-China and Large English Berkshire Swine. Inspection invited. Write.

## SWINE.

**ELM GROVE HERD OF REGISTERED POLAND-CHINA Swine and Jayhawk strain of Plymouth Rock Fowls.** Z. D. Smith, proprietor, Greenleaf, Washington Co., Kas. Pigs and Sows bred, for sale. Satisfaction guaranteed. Eggs \$1.25 for 13; \$2.25 for 26.

**WALNUT GROVE HERD OF POLAND-CHINAS.** V. B. Howey, proprietor, box 103, Topeka, Kas. My hogs are strictly thoroughbred, of the finest strains in America. All breeders recorded in Ohio Poland-China Record. Chief Commander No. 6775 at head of herd. Pigs for sale, from 2 to 10 months, from \$10 to \$25.

**W. H. BIDDLE,** Augusta, Kas., breeder of Pure-bred Poland-China Swine, from most noted strains. Also pure-bred Bronze Turkeys. Have a choice lot of early birds at \$4 to \$5 per pair. Pigs at reasonable rates.

**W. W. WALTIRE,** Carbondale, Kas., breeder for Hogs. Stock for sale.

**J. M. McKEE,** Wellington, Kas., breeder of Poland-China Hogs—A. P. C. R. Five kinds of Poultry. Choice pigs and fine fowls for sale. Prices low. Write.

**ROBERT COOK,** Iola, Kas., thirty years a breeder of Poland-China Swine of the very best and most profitable strains. Breeders registered in O. P. C. R.

**W. M. PLUMMER,** Osage City, Kansas, breeder of Recorded Poland-China Swine. Also Light Brahma Chickens. Stock for sale at reasonable rates.

**BAHNTGE BROS.,** Winfield, Kas., breeders of Large English Berkshire Swine of prize-winning strains. None but the best. Prices as low as the lowest. Correspondence solicited.

**F. M. LAIL,** MARSHALL, Mo., breeder of the finest strains of **POLAND-CHINA HOGS AND PLYMOUTH ROCK CHICKENS.**

Eggs in season, \$1 for 13. Catalogue free.

## SWINE.

**F. W. ARNOLD & CO.,** Osborne, Kas., breeders of pure-bred Poland-China Swine. Breeders all recorded in Ohio Record. Young stock for sale. Also Wyandotte and Langshan Fowls and Pekin Ducks. Eggs, \$1 per 13.

**OUR ILLUSTRATED JOURNAL.**—A full and complete history of the Poland-China Hog, sent free on application. Stock of all ages and conditions for sale. Address J. & C. STRAWN, Newark, Ohio.

## SHEEP.

**IMPROVED REGISTERED MERINO SHEEP.** Poland-China Hogs, Light Brahmas, Plymouth Rocks and Bronze Turkeys—all of prize-winning strains, bred and for sale by R. T. McCulley & Bro., Lee's Summit, Jackson county, Mo.

**SHROPSHIRE-DOWNS.**—Ed. Jones, Wakefield, Clay Co., Kas., breeder and importer of Shropshire-Downs. A number of rams and ewes for sale, at lowest prices, according to quality.

**H. V. PUGSLEY,** Plattsburg, Mo., breeder of **MERINO** Sheep. Ewes averaged nearly 17 lbs.; stock rams, 34 lbs. to 38 1/2 lbs. Extra rams and ewes for sale. Also Holstein Cattle.

## POULTRY.

**TOPEKA WYANDOTTE YARDS.**—A. Gandy, proprietor, 624 Kansas avenue, Topeka, breeder of Golden, White and Silver Laced Wyandottes. Write for what you want.

**HIGH-BRED LIGHT BRAHMA CHICKENS.**—In season. Also eggs, \$2.00 per 13. J. A. McMahan, Box 229, Clearwater, Sedgwick Co., Kas.

**SEA SHELL FOR POULTRY!** 100 pounds \$3.50, in seamless sack. **HUGHES & TATMAN, NORTH TOPEKA.**

**IT WILL PAY YOU.**—To send for our beautiful Illustrated Circular, full of valuable information. Sent free to all. Address C. A. Emery, Lock box 289, Carthage, Mo.

**MRS. A. B. DILLE,** Edgerton, Kas., breeder of Wyandotte, P. Rocks, Langhans, Pekin Ducks and Mammoth Bronze Turkeys. Wyandotte and Langshan eggs, \$1.50 per 13; P. Rock and Pekin Duck eggs, \$1 per 13.

**COLLEGE HILL POULTRY YARDS.**—Pure-bred Brown Leghorn and Houdan Fowls for sale. Also eggs for sale. Send for prices. W. J. Griffing, College Hill, Manhattan, Kas.

**MRS. MINNIE YOUNG,** Warrensburg, Mo., breeder of pure-bred Bronze Turkeys, White and Brown Leghorns, Light Brahmas, Pekin and Rouen Ducks. Eggs in season. Write for wants. No circular.

**TOPEKA POULTRY YARDS.**—Wm. A. Eaton, Topeka, Kas., breeder of Plymouth Rocks, Light Brahmas, Partridge and Black Cochins. Can furnish W. & B. Leghorns and W. F. B. Spanish. Eggs \$2.25 per 13.

**SUNFLOWER POULTRY YARDS.**—T. S. HAWLEY, Topeka, Kansas, breeder of **PURE-BRED POULTRY.** Leading varieties.

**MARMATON VALLEY POULTRY YARDS.** Mrs. ALLIE E. MILBURN, (Lock box 1401), FORT SCOTT, Kas., breeder and shipper of thoroughbred Lt. Brahmas, P. Rocks, Wyandottes, B. Leghorns, B. Javas, B. Cochins, Mam. B. Turkeys, and P. Ducks. Fowls for sale at all times. Send for circular. Correspondence solicited and cheerfully acknowledged.

**EUREKA POULTRY YARDS.**—L. E. Pixley, Eureka, Kas., breeder of Wyandottes, B. B. R. Games, P. Rocks, B. and W. Leghorns, Buff Cochins and Pekin Ducks. Eggs and birds in season. Write for what you want.

**N. R. NYE,** Leavenworth, Kas., breeder of the leading varieties of Land and Water Fowls. DARK BRAHMAS a specialty. Send for Circular.

**SHAWNEE POULTRY YARDS.**—Jno. G. Hewitt, Prop'r, Topeka, Kas., breeder of choice varieties of Poultry. Wyandottes and P. Cochins a specialty. Eggs and chicks for sale.

## MISCELLANEOUS.

**TOPEKA TRANSPORTATION CO.**—Office, 517 Kansas Ave., Topeka, Kas. Telephone 179.

**VETERINARY SURGEON.**—Prof. R. Riggs, Wichita, Kas. Castrating Ridgling Horses and Spaying Cattle a specialty.

**S. A. SAWYER,** Fine Stock Auctioneer, Manhattan, S. Riley Co., Kas. Have Coats' English, Short horn Hereford, N. A. Galloway, American Aberdeen-Angus Holstein-Friesian and A. J. C. C. H. R. Herd Books. Compiles catalogues.

## A VALUABLE BOOK

On plans for constructing nine sizes of INCUBATORS—with latest improvements, moisture apparatuses, information on incubation, heat-regulators, egg-turners, etc., sent on receipt of 5 cents in stamps. **J. W. HILE, VALLEY FALLS, KAS.**

# HAZARD STOCK FARM

—OF—  
**NEWTON, - - KANSAS,**  
Breeder of A. J. C. C. H. R.

# Jersey Cattle.

The herd is headed by the Stoke's Pogie Victor Hugo Duke bull, St. Valentine's Day 15278, and the Coomassie bull, Happy Gold Coast 14713. Sons and daughters by above bulls out of highly-bred cows, for sale for next ten days. Address **S. B. ROHRER, Manager.**

## FOR SALE!

# SHORT-HORN BULLS

Bred at the Agricultural College. We offer a good lot of **SIXTEEN-MONTHS-OLD BULLS**—all recorded, reds, of good families, good individuals. Price \$100 and upwards. Also choice **POLAND-CHINA AND BERKSHIRE PIGS.** **E. M. SHELTON,** Address Superintendent of Farm, MANHATTAN, KAS.

### INCREASING THE GRASS CROP.

Considering the importance of grass in the farm economy it is surprising that this crop receives so little attention. It is usually the last resort of land that has been plowed and cultivated until other crops will not pay for the labor, and is then seeded down as the best means of getting something from it with smallest expense. Only a light seeding is given, as the farmer, with wisdom gained by years of experience with grassy corn and potato fields, has an unyielding faith in the tendency of grass to cover the ground if given half a chance. On moist land the roots of grass will spread amazingly, but it is a great mistake if seed is not sown thickly enough so that the surface is amply covered from the first. Weeds that might be greatly weakened by a strong growth of grass or clover get headway, and by the time the hay is ready to cut the weeds so largely predominate that its value is greatly lessened. It is clearly impossible to have the best grass land for either pasture or meadow without good previous cultivation of the soil.

Yet if more care were given to seeding down and getting a good stand of grass, no better means could be devised to insure improved methods of farming. With well seeded fields there need be less plowing, and that might be properly limited to the area that can be thoroughly manured and cultivated. A really good grass or clover crop will pay better average profits than those requiring much more labor. Now the vast bulk of spring plowing is done on land so poorly seeded, and perhaps so filled with weeds, that unless plowed and sown with some grain or planted with corn or potatoes it is likely to produce nothing whatever. And so, in despair of getting any good from it in any other way, thousands of acres are plowed yearly for which the farmer has neither manure nor labor to make it profitably productive. There is profound meaning in the admonition to let him that ploweth plow with hope. It is not reasonable to expect as good results when plowing in despair, and as a last resort is substituted for this method.

Not the least of the advantages of having a good seeding of grass would be the certainty it would insure of a rich sod, to be turned under when the land came to be plowed. Valuable as the clover crop is, its roots, reaching into the subsoil, are worth quite as much for increasing fertility as the top. They are perhaps better than any other seeding as a green manure because of their speedy decay when plowed under. No trouble from clover roots sprouting and needing extra cultivation to keep them down. The grasses do not decay quite so readily as clover, but their roots are only a little less valuable as manure when fairly set to rotting. Now, on the great majority of farms, the difference between a poor and good seeding, with all its more important after results upon the fertility of the soil, depends mainly upon the amount of seed used. Instead of sowing liberally so that no space will be unseeded, thousands of farmers try to economize, sowing two or three quarts of timothy seed and perhaps four or five of clover seed, when at least of the clover twice the amount, if sown, would give better returns than any investment the farmer could make of this trifling expense.

The grass crop, after seeding, ought to have some attention the same as any other. Few are aware how great yields of grass and clover may be obtained if the soil is manured so highly as to allow frequent cutting. It is quite common in some places to cut red clover twice, the first time for hay and the last for seed; but on soil rich enough four, five and even six cuttings of clover have been taken in a single year, the whole rivaling in bulk and value a good crop of corn fodder. And good clover hay or ensilage is perhaps the best easily obtainable food that can be given in connection with corn fodder to supply its deficiencies. So, instead of giving the greater attention to corn as feed, doing away with the need of growing clover and grass, it is likely in the end to cause greater attention and care to be given to these crops, not as the main but the supplemental food. But this will never be on the basis of three-quarters of a ton or even a ton of hay per acre. It is easily seen that these light crops are unprofitable, and possibly many farmers are learning that hay thus grown on high-priced land is the dearest food that stock can have. The cost of cutting an acre of

good hay, thanks to the horse-power mower, is no greater than that of cutting over land that will not yield half a ton per acre. A large share of the light hay crop is grown on rough, uneven land, where the cost of cutting even by the mower is greater than that of a good crop on a smoother surface.

On an average, farmers must grow much larger crops of hay than they recently had, or grass must be superseded as forage. The greatly increased area sown with grain, and the greater attention given to ensilage of corn fodder, is evidence that many are accepting this horn of the dilemma. Yet too much grain sowing has been followed by diminished yields, and worst of all by glutted markets and low prices. Is it not evident that the other way out of the dilemma, that of increasing the grass crop, is the true one? We say nothing against the ensilage of corn fodder or any other use of it, excepting that it would be more successful if good grass or clover could be grown in quantities sufficient to be profitably fed with it. Grain feeding with straw has with thousands of farmers supplanted the old-fashioned reliance on grass and hay, mainly because through neglect of the grass crop grain is unnaturally cheap as compared with hay. Let sufficient attention be given to grass to insure yields of two or three tons of hay per acre, and this crop for the labor expended will be found fully as profitable as any other, and more profitable if fed to thrifty, growing and productive stock, as it should be. It is in this way only that the glut in the grain market from which farmers have suffered of late years may be prevented. There has been a great deal of feeding of cheap grain to stock with the idea that this must be profitable because the grain was low in price. This overlooks the fact that grain has been and is too cheap. The farmers who grow and then feed it lose in one way all they gain in the other operation, and then wonder how it is that they do not make money. We feel quite certain that the only way to put farming on a profitable basis is to give more attention to the grass crop, get larger yields per acre, and feed it to stock that will make a profit on it. We have tried long enough the policy of relying on grass as the main stock feed, while depending on its unnatural cheapness for profit in feeding it.—*American Cultivator*.

### Aberdeen-Angus and Galloway Cattle.

These hardy breeds of domesticated animals are rapidly gaining a foothold in this country, and as their merits become more generally known they will be the choice of a great many people. Their peculiar qualities give them great prominence among breeders. Having no horns, they obviate the necessary painful operation of dehorning, now being practiced by so many owners of horned cattle. Why torture the animals whom nature has provided with horns, by attempting their removal, when this same nature has so generously provided a superior specie of cattle devoid of any such unpleasant appendage? Then, too, competent judges at the leading expositions of our land have granted their awards to the Galloway and Polled-Angus breeds as first-class beef animals, which is indeed a grand card in their favor; and now, should you wish to obtain a few of these choice animals, remember that H. H. Davidson, a prominent breeder of hornless cattle, will sell at public auction on Saturday, June 11, at his place adjoining Wellington, Kas., twenty-five head, ranging from 1 to 4 years of age. This offering consists of bulls only, and of such as any one would be proud to have head their herd, the thoroughbreds all being imported direct from Scotland and of the highest merit in every particular. Twelve months time, without interest, will be given. The cattle are all thoroughly acclimated and guaranteed as represented.

Employees of French railroad companies have exceptional privileges. Rates of freight on goods consigned to them personally are much lower than the usual rates. They receive through the special stores kept for them provisions of all kinds at wholesale prices. They can purchase fuel at the same money as the company paid for it. They are attended to by the company's physician when they are sick, and the medicine is supplied gratuitously. If employees are killed while on duty their orphans are placed in a proper institution at the expense of the company and kept there until they are 17 years old.

### Gossip About Stock.

Levi Hurst, Oswego, Kas., a Poland-China breeder of eighteen years experience, places a breeder's card in this weeks paper and offers tempting terms to purchasers.

The Ottawa Herd of Duroc and Poland-China swine, owned by L. L. Whipple, of Ottawa, will be found represented in our advertising columns this week. This well-established herd should receive a large patronage.

Foster & Lee, of Topeka, offer a rare chance to purchasers at their sale to be held four miles southwest of Topeka on June 15. Both Herefords and Short-horns will be sold. Every farmer should have at least a few well-bred cattle. There's money in it.

The catalogue of Oakland Stock Farm Herd's fourth annual sale of Short-horns, owned by Col. W. S. White, Sabetha, Kas., has been received. It comprises the best offering yet made by Col. White. There should be a large attendance and lively bidding. This year will unquestionably be the best year for buying improved cattle to make money. Present prices won't last much longer.

In ordering an advertisement of a public sale, Mr. J. S. Hawes, of Colony, writes: "I have concluded to hold a public sale of my cattle, and propose to make it the Hereford sale of the season. I shall include some Fortune cows and Grove and Wilton heifers which will 'make their mark' wherever located." This will be a fine opportunity for the Kansas breeder to secure a good yearling bull of the same strains, at their own prices. Every animal will be sold. No reserve. Send to Mr. Hawes for catalogue of sale.

C. Mayes, of Peabody, Kas., who has been for several years a regular buyer of Hereford cattle of the Early Dawn Herd, now located at Maple Hill, has just made another important addition to his herd by buying of the Early Dawn Herd a bull to head his herd, the Horace Wilton 29186, calved April 28, 1885; sire Lord Grey De Radcliffe Wilton, by Lord Wilton; dam Wild May, by Bredwardine, by Horace. His grand-dam by Aberdeen 5248, by Sir Thomas 20. The sons of Mr. Mayes will hereafter manage and own this establishment.

We are pleased to note that the Early Dawn Herd of Herefords, located at Maple Hill, Kas., is building up a large home trade as well as in Colorado. Kansas men should not fail to visit Kansas breeders first in buying stock, for the reason that almost every breeder that has an established herd can sell as good stock as may be found in America and at prices as low if not lower. Almost every one that visits the Early Dawn Herd are surprised to find the high class of stock on hand. The calf crop this year is quite satisfactory, numbering about sixty thoroughbreds already. We wish the firm success in their endeavors to build up a large permanent Kansas trade. Every animal, and more, too, are needed in the State.

### Management of Sloughs.

Sloughs are not as troublesome in Kansas as they are in Illinois and Iowa, still they are often very much in the way. The best way to manage them is to grade them, that is, get them smoothed off, then sow grass seed in them, using varieties of seed to suit the character of the soil. Here are some good suggestions on the subject clipped from the Iowa Homestead.

"The slough is the one unsightly thing on a prairie farm. And yet there are sloughs and sloughs, broad, flat sloughs, narrow, winding, wet sloughs, and sloughs with the sloughiest part not in the sloughs but on the sides. What to do with them is the puzzling thing to many a farmer. The general thing is to do nothing, and a common practice is to plow the dirt toward them and to allow them to encroach on the plow land a little more every wet year."

"The slough represents, therefore, so much waste land, worse than wasted, because interfering greatly with cultivating the lands around them in corn. Every farmer would like to plow straight across a forty without turning, but with sloughs it is impossible. Why not tile them? How much will it cost? As Hamlet said, 'there's the rub.' Leaving out boarding the hands and hauling the material, tiling cost 50 cents a rod. To tile four hundred rods of slough allowing four rods wide on both sides will cost \$400, or \$40 per acre. Will it pay?

That depends on the use to be made of it. Will it pay to cultivate these narrow sloughs after they have been tilled successfully and made perfectly dry? That again depends upon circumstances."

"When the soil is inclined to wash, and where these sloughs run much below the level of the prairie and drain much surface, we should say most decidedly no, and for the reason that they will inevitably wash into gullies and the difficulty of cultivating the surrounding land will be just as great as before. Tile draining sloughs to obtain stock water when needed will always pay. Tile draining as feeders for fish ponds will pay but after the lands are tile drained we would say, never plow up the center of the slough."

"Another difficulty in the way of draining these tortuous sloughs is the impossibility of using machines. They are so tortuous that the drains must be made by hand, and it is only after much experience that they can be made successfully. In much of the State a hand cannot be found who can be trusted to do the work.

"Practically as matters stand now, the best thing to do with these winding sloughs is to sow them to alsike clover and blue grass. There is no trouble in getting a stand with proper management. First, burn off the grass and sow the seed. Then level down the ant hills with a shovel and go on the slough any time in the summer when it is dry enough and mow down the slough grass. Rake it up for hay if you need it, and if not let it lie. If the slough grass is kept mowed off it will be but a little time till the alsike will make a stand, and blue grass will grow where you least expect it. Then if you have the surrounding land in corn you have a winter pasture just where you need it—in your corn field. If the slough is a narrow one throw out your plow and planter and go across. While the alsike is getting hold you will get a crop of hay, and after it is fairly set you will have a good chance for hay or seed. In this way the eyesore of the farm will be made to yield some revenue.

"You are aware that this will not be regarded as good advice by some enthusiastic advocates of drainage. We can't help it. We are writing for the practical, every-day farmers who have no great surplus of cash, and who want to know what is the best thing to do with the slough, and what he can do when he is short of corn. Remember we are not writing about broad, flat sloughs where a tile drain every four rods will make a complete drainage, and which can be tiled by machinery for \$20 per acre, nor are we writing about the 'drains' of the slope, but about the narrow sloughs of Southern and Eastern Iowa."

If we would churn the cream at the point of mild acidity, says the New York Tribune, thoroughly wash out the buttermilk with weak brine and then salt the butter in a brine bath, instead of working dry salt into the butter, the consumer would soon come to learn that butter has a flavor of its own, independent of salt.

The Nineteenth Century Club is an organization that will consist of an equal number of men and women. It is hardly to be expected that they will agree on all subjects; but it can surprise no one to learn that Dr. Pierce's "Golden Medical Discovery" is unanimously pronounced the most successful remedy extant, for pulmonary consumption, as has been demonstrated in hundreds of cases; it positively arrests this disease and restores health and strength, if administered in its early stages. By druggists.

### Estey Organs and Pianos.

These justly celebrated and unrivaled make of musical instruments stand without a peer in the known world. Over 100,000 are now in use, and the company is constantly taxed to its fullest capacity for more. Feeling the pressing need of a branch office for the State of Kansas and country tributary thereunto, they have establishment permanent headquarters in Topeka, from whence all orders coming from Kansas, or east of the Rockies, will be filled. The company refers you to their advertisement which appears in another portion of this paper, and request that you write E. M. Miller & Co., who will fill all orders promptly and at rates worthy your consideration. Mention the KANSAS FARMER.

**Some Practical Suggestions.**

L. O. Stevens, Almor, Iowa, a practical farmer and dairyman makes some very good suggestions in a letter to the *Homestead*. He says:

I read with interest and profit the facts and experience of my brother farmers, and those expressions gathered weekly save us expense and damage. In caring daily for the dairy herd, this knowledge is very often turned to practical account. I see it stated in many journals that the feed of brood animals on the farm should be lessened sometime before farrowing, in order for surer success in farrowing and cleansing. It has been my habit for over thirty years in Iowa rather to increase the grain feed for any animal of the domestic herd. I am wont to diagnose the ailments of animals and use such medicines and practices as I would on the human being. The mother of the human partakes of nutritious food to full habit, up to the birth of her child. So I reason with the dams of my domestic herd, and I have had admirable success all along the line. There are exceptions to all rules, so there are also some exceptions with cows in cleansing. None should pass twelve hours in cleansing without aid in liberating the afterbirth.

In case of cuts or slits in the teats of cows, as after a wire fence has snagged them, I use court or sticking plaster alone. Staunch the blood, draw the edges of the wound in place and properly attach the plaster, and generally it will be found to heal rapidly, with very little irritability to the cows in milking. No remedy I can find for cuts on the human or animal where plaster can be used surpasses it. Stitches create more irritability and a longer period of healing.

Much is written on the subject of abortion in the dairy herd. Often the entire herd suffers. I have been a life-long dairyman, nearly fifty years, and have suffered comparatively little in that direction. The causes are unquestionably manifold. The remedy is vigilance and good judgment. I do not over work my herd, over feed them, or introduce them suddenly and abundantly to rank feed or change of feed. As to ergot or poisonous weeds, I do not give much credit to the herd feeding on them. Instinct dictates to them to graze or eat their own proper food. I do not think it a contagious disease, nor do I think, generally, that if a cow aborts once she will necessarily continue to do so. Such is not true in my herd. I have had only one cow that has been troubled a second time, and she became ruined.

It is my custom to carry my herd of cows onto grass by keeping up the hay and grain feed till grass is abundantly strong and supporting to meet their most reasonable wants and the milk product on grass till it begins to fall insures large results. When the grass begins to fall, I have a field of green sweet corn ready for the grass deficiency. My style of planting it is with the planter, dropping six kernels, rows one way and hills twenty inches apart. Every stock will bear one or two ears. I plant May 1st, May 15th and June 1st. When ripe I snap the ears or cut up and feed. In case I snap the ears I leave the hard portion on the stalk. I find this corn feed most valuable to start thin hogs and spring pigs. A vast amount of feed will thus be furnished by the acre. Clover meadows in the fall furnish excellent feed for cows, and clover hay also for winter, and clover hay for swine in the winter is especially valuable.

We are, as farmers, far wide from the standard of first-class. In July, 1883, I visited the old homestead in Vermont. I had been absent over a score of years, and was told that Vermont farms and farmers were deteriorating. Their crops were small and what they did raise was at a large expense of fertilizers. I went prepared with delight to tell them of the rich and fertile lands and farm in Iowa. But after a few days with my brother, traveling over the large farm of my first days, and seeing the growing crops, the hill pastures and the many fields, and learning the average of hay, 1½ tons; oats, 75 bushels; wheat (when I left they could not grow it), now 35 and 40 bushels; India wheat, 60 bushels; potatoes, 300 bushels, and corn 60 bushels shelled, I was silent about Iowa—I knew we were not "there;" but I do know with the natural fertility of our soil we ought to, and can, produce double the quantity to the acre, and we ought not be numbered A1 far-

mers till we get there. Let the manure be driven forth and spread on the corn field in winter. Let clover be the main fertilizer, and we shall soon get there. Grand crops, to be invariably utilized on the farm, will grow like first-class stock. Set the standard high, and reach it at the earliest day possible.

Wheat contains all the best elements of food for both man and beast. Eggs and milk are perfect food.



This is what killed your poor father. Shun it. Avoid anything containing it throughout your future useful career. We older heads object to its special 'ROUGHNESS.'

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For two or three nights sprinkle "ROUGH ON RATS" dry powder, in, about and down the sink, drain pipe, pipe. First thing in the morning wash it all away down the sink, drain pipe, when all the insects from garret to cellar will disappear. The secret is in the fact that wherever insects are in the house, they must drink during the night.

Clears out Rats, Mice, Bed-bugs, Flies, Beetles. "ROUGH ON RATS" is sold all around the world, in every clime, is the most extensively advertised, and has the largest sale of any article of its kind on the face of the globe.

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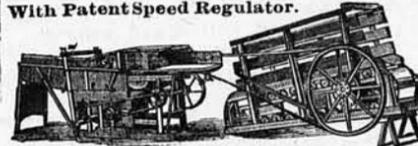
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CAPT. SYDNEY SMITH, Secretary of the Dallas State Fair and Exposition Association, writes us, April 27th: "We have some 4,000 squares of your Black Diamond Prepared Roofing on all our buildings, and it suits all our purposes admirably." [True copy of letter sent on request.]

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**GEO. F. MARSTON, Denver, Colorado.**

## The Home Circle.

### Just Out of Sight.

In idle reverie one winter's day  
I watched the narrow vista of the street,  
Where crowds of men with noisy, hurrying  
feet  
And eager eyes went on their restless way.  
Idly I noted where the boundary lay  
At which the distance did my vision cheat;  
Past which each figure fading fast did fleet,  
And seemed to melt and vanish in the gray.  
Sudden there came to me a thought, oft told,  
But newly shining then, like flash of light—  
"This death, the dread of which turns us so  
cold,  
Outside of our own fears has no stronghold;  
'Tis but a boundary, past which, in white,  
Our friends are walking still, just out of  
sight!"

"Just out of sight!" Ay, truly, that is all!  
Take comfort in the words and be deceived,  
All ye who can, and have not been bereaved!  
"Just out of sight!" 'Tis easy to recall  
A face, a voice. O, foolish words, and small,  
A bitter cheer! Men have all this believed,  
And yet, in agony, to death have grieved  
For one "just out of sight" beneath a pall!  
"Just out of sight!" It means the whole of  
woe;  
One sudden stricken blind who loved the  
light;  
One starved where he had feasted day and  
night;  
One who was crowned to beggary brought low;  
All this death doeth, going to and fro  
And putting those we love "just out of  
sight."

'Tis a little thing  
To give a cup of water; yet its draught  
Of cool refreshment, drained by fevered lips,  
May give a shock of pleasure to the frame  
More exquisite than when nectarean juice  
Renews the life of joy in happiest hours.  
—Thomas N. Talford.

We figure to ourselves  
The thing we like, and then we build it up  
As chance will have it, on the rock or sand;  
For thought is tired of wandering o'er the  
world,  
And home-bound Fancy runs her bark ashore.  
—Sir Henry Taylor.

### The Flowers of the Field.

How they grow, these beautiful May days.  
Their name is legion, and their forms and  
colors are wonderfully varied. It has al-  
ways been a delight for me when walking or  
riding out to notice the lowly plants—some-  
times slightly called weeds—and form  
new acquaintance with some, and recognize  
old familiar friends in others. Sometimes  
it requires a few minutes study to make  
sure that the plant before me is the same I  
knew 'away back East'; but when I am cer-  
tain, I say: "How acclimating has changed  
you! I wonder how long you have been in  
Kansas or when civilization brought you  
here."

I stand in perplexity before the gorgeous  
plants which grow so thriftily for some peo-  
ple. I have no words to express my pro-  
found admiration for the window-full of  
rich blossoms and foliage. And so I turn  
from them with a sigh for their overpower-  
ing grandeur, and find consolation in a wee  
violet.

One day this spring I found a bed of dan-  
delions, and I knew that some congenial  
spirit had sown the seed which produced the  
sunny, familiar heads. As I gathered a  
handful and pressed them to lips and cheek,  
I was wafted on their breath back into some  
childhood haunts where I built up little yel-  
low mounds with them, and covered hands,  
face and dress with their golden powder.

More lowly and more uninteresting plants  
—those that grow by the dusty wayside in  
late summer—have power to take me back  
to the fairyland of childhood, and I envy the  
little girl walking home from school bare-  
foot and unconscious of the dusty weeds  
that are soiling her feet and dress as she is  
of any possible anxiety the future may have  
in store for her.

There are so many strange little plants  
that spring up all over the prairies, that even  
show their heads where they are not wanted.  
They crowd the cornfields; they cause the  
owners of the fields to say anathemas. They  
grow among the roses of the front yard as  
familarly as they do among the wilder and  
sweeter roses of the prairies. Yes, I would  
rather they kept their place; but yet I do  
not wish them to get entirely out of sight.

Years ago, how we students of botany  
hunted for them in by-ways and hedges!  
They did have a shy way then of hiding  
themselves until we despaired of finding,  
analyzing and pressing the required number  
of specimens. I have often thought what  
"happy hunting grounds" for botanists are  
afforded among these numerous flowers of  
the fields; what research for the novice who  
is enthusiastic in finding out for himself the  
classification and uses of these seemingly  
useless plants.

The last idea has grown upon me during

the last few years, until I began to wonder  
where the old Gray's botany had found a  
final resting place. It had descended to and  
been thumbed by at least two of the broth-  
ers and sisters since I had carried it to and  
from recitations. Had it been worn out?  
Had it been lost in the vicissitudes of mov-  
ing? I would find out. I would make a  
pilgrimage to where the old school-books  
ought to be, and bring such as I had the  
fondest affection for back to my country  
home and renew my old acquaintance with  
them.

The happy result of the pilgrimage is the  
possession of several old school-books—more  
valuable from their associations, probably,  
than for anything I shall learn from their  
contents, except Gray's botany—I did find  
and resurrect it, and hope soon by its help to  
have a more familiar knowledge of these lit-  
tle prairie flowers and weeds.

A lady who is making a specialty of bot-  
any, said to me, "Gray's botany is so very  
old, it is not used at all now." So even  
books outlive their usefulness! Well, old  
friends are best, and I can understand them  
best. There must be something about the  
flowers of the field which my old friend can  
tell me. He cannot have forgotten all he  
ever knew; and I know the flowers have not  
all changed.

PHOEBE PARMALEE.

### The Farmer's Wife.

The late Ben Perley Poore wrote, among  
his best articles, this:

"There is scarcely any lot in life, in this  
country, which promises such constant and  
uniform good health, such uninterrupted  
prosperity, as that of a farmer's wife. This  
is particularly the case if he has a well im-  
proved and well-stocked farm, all paid for,  
and a sufficient surplus in bank or at hand  
ready for any emergency or to supply any  
call at any time or season. This is no fancy  
picture, for such cases are found all over the  
country. The wives of such men are incom-  
parably more happy, with a good assurance  
of quiet comfort to a good old age, than the  
wives of the professional men dependent  
upon the patronage of fickle public opinion,  
which is disturbed by every tattler or mali-  
cious slanderer; or even the wives of the  
merchant princes, who may clear their thou-  
sands in a year, and roll gayly in sumptuous  
carriages, but who, notwithstanding, by  
failure of banks or correspondents, the  
treachery of clerks and agents, are fre-  
quently brought to bankruptcy, and dying in  
despair, leave their wives and daughters in  
the heritage of beggary and disgrace, to  
spend the evening of their days in tears and  
want.

And where is there a more beautiful spec-  
imen of life, health and enjoyment than the  
daughter of the thrifty farmer, who fully  
appreciates the delights and ornaments of  
his household. On her cheeks the roses and  
lilies are vying for supremacy. So lithe of  
limb, a pattern for the gazelle upon the An-  
atolian mountains. Her breath as pure as the  
morning air. Her laugh and songs rivaling  
the voices of the birds in the groves. Her  
step and spring as elastic as the new-made  
bow. The sight of such a joyous, full-devel-  
oped specimen of the sweetest and purest  
being that ever adorned or blessed the earth  
makes all around her happy.

Unfortunately, however, such is not the  
picture of the situation on every farm. Man  
is perverse, ignorant, stupid, unfortunate  
and unhappy, entailing poverty and misery  
upon himself and upon those whose desti-  
nies are inseparably connected with his  
energy and enterprise. The self-denying  
devotion of the wife and daughters to the  
comfort, prosperity and happiness of im-  
provident men sometimes is enough to, and  
probably does, make angels weep. If there  
is any redeeming trait in man's heart, if it be  
possible to wake up his dormant energies, it  
would be the heroic virtues of such wives  
and daughters; if the uncomplaining and  
unceasing drudgery of the wife of his youth,  
and the object of his early ardent devotions,  
will not nerve his arm and awaken his en-  
ergies to action, it is useless to talk about the  
nobleness of man whom God has created in  
his own image.

While the farm is the natural place of  
health, contentment and happiness, thou-  
sands of cases are but the abodes of misery,  
discontent and discord. The man and wife,  
with their children, striving to make each  
other unhappy, until this earth, which was  
intended, and was amply endowed for the  
purpose, to be a paradise of the sweetest

social enjoyment, is but a sad heritage of  
misery, want and woe. 'Ye know your duty  
but do it not.'

### Notes and Recipes.

Try cranberry poultice for erysipelas.  
Save the tea leaves for use in sweeping.  
They will brighten a carpet wonderfully.

A piece of pointed whalebone or pine  
is good to clean out corners. Wash your  
windows with sponge and polish with tis-  
sue paper.

Clean lamp chimneys by holding them  
over the spout of a teakettle full of boiling  
water and then wipe with a clean cloth. It  
will make them beautifully clear.

Never put milk, fat or any oily substance  
into the ear for the relief of pain, for they  
soon become rancid and tend to incite in-  
flammation. Simple warm water will  
answer the purpose better than anything else.

To heat cloths for hot applications with-  
out scalding your hands, lay a wet cloth be-  
tween two folds of brown paper, place it on  
the stove, pressing the top one down lightly  
with your fingers, and in a few minutes the  
cloth will be hot enough to blister.

In cooked starch put in gum arabic, dis-  
solved to mucilage, a teaspoonful to a pint  
of starch for collars and cuffs and shirt  
fronts, a tablespoonful for a dress. For  
muslin dresses it is invaluable; this stiffness  
does not leave the dress until washed  
again. I also put in a few shavings of a  
sperm candle. I have no trouble in bring-  
ing a gloss on my starched clothes. A tea-  
cup full of the starch prepared for the  
colored clothes, put into the last rinsing  
water, will give tablecloths and napkins just  
the right stiffness to iron nicely, and they  
will keep clean much longer. The cotton  
clothes also iron nicer, although they do not  
take enough of the starch to be perceptible  
to the hands.

The nicest way to prepare eggs for tea, is  
to fill the spider or frying-pan (the former  
is best, being deepest) two-thirds full of  
boiling water at boiling heat, drop in the  
eggs one at a time, from the shell if you  
know they are fresh; if you only guess at  
their being fresh, break them into a saucer,  
and slip them one at a time into the water,  
hot enough to cook them, but do not let it  
boil, dip some of the water over the tops of  
the eggs until they are white, or have a  
cover very hot to put over them, and they  
will cook on top by the steam; when done  
soft or hard as you like them, take them up  
one at a time, free from water, on to a plat-  
ter, with no seasoning of any kind; you can  
garnish with bits of green, as cress, celery  
leaves in little pieces, or parsley. When  
eaten, the only seasoning is a little salt and  
pepper, if liked; nothing else if you wish  
delicate, first-class eating.

### Prune Pudding with Lemon Sauce.

Beat half a pint of flour with milk enough  
to make a smooth paste; add two well-  
beaten eggs with a pinch of salt. The bat-  
ter should be thick and if necessary add  
more flour. Have ready a half pound of  
prunes that have been stewed until soft,  
drained and stoned. Dredge them with  
flour and stir them in the batter. Dip your  
pudding cloth into boiling water, wring it  
out, and flour well; pour the pudding in,  
leaving room for it to swell; plunge it into  
boiling water and boil steadily for two  
hours. It is essential that there be plenty  
of water for the pudding to swim about in,  
that the cloth be tied tightly, and that the  
boil be a steady and continuous one. To make  
a nice sauce for this, pare the thin yellow  
rind of a large lemon, and put it into a bowl  
with the juice of the lemon; pour on half a  
pint of boiling water and let it stand for an  
hour to draw out the oil from the lemon  
rind. Put a large tablespoonful of butter  
into a saucepan, and when it melts stir in  
an even teaspoonful of flour; mix until very  
smooth; add the lemon juice and water  
strained from the rind, half a cup of sugar  
and a pinch of grated nutmeg and simmer  
until you have a smooth, creamy sauce,  
about two minutes after it commences to  
boil. Remove to one side of the fire and  
add the beaten yolks of two eggs almost  
drop by drop, so as not to curdle them. Let  
it thicken for two or three minutes, stirring  
the while, but do not let it boil.—Ex.

Try eating fresh radishes and yellow tur-  
nips for gravel.

### Easy Housekeeping.

In former years it was no easy task for a  
young married couple to "go to housekeep-  
ing," and it required no small expenditure  
of cash. A range or cooking stove, a coffee  
and spice mill, a mortar, a cake-board and  
rolling-pin, a tray and chopping-knife, not  
to mention a large number of pots, kettles,  
frying-pans and bowls, and a large stock of  
raw materials in the line of provisions, were  
required. Then considerable skill was  
necessary to use all these instruments for  
preparing food for the table, and that skill,  
unfortunately, was not possessed by the  
young wife. The consequence was that  
most persons who embarked on the sea of  
matrimony sailed directly to a boarding-  
house, and set up their household divinities  
in a back chamber, where they remained  
till the landlady levied on them for an over-  
due bill for meals and lodgings.

But modern invention has rendered house-  
keeping very easy. A couple may now set  
up for themselves with very few utensils,  
scarcely any provisions, and next to no  
knowledge of cookery. A gas or oil stove  
takes the place of a costly and cumbersome  
cooking-range. Coffee is bought not only  
parched but ground. Spices and pepper  
come all prepared for use. Every kind of  
bread, cake and pastry can be purchased at  
a slight advance on the cost of the materials  
they contain. If one wishes the sport of  
making them, self-raising flour may be had  
in any grocery. Fruit of all kinds all ready  
for the table can be purchased about as  
cheaply as that which must be prepared.  
Not only lobsters and other shell fish, but  
salmon, may be bought cooked and ready to  
be served at a price but little above what  
the crude articles cost; and cooked corned  
beef, tongue, pigs' feet and ham have long  
been on the market.

There are also canned soups, that only  
need to be diluted, mince meat, all ready to  
put between piecrusts, and roast meats and  
fowls of all descriptions. Some grocers  
keep mush prepared for frying. Boston  
baked beans, put up in cans, have had a  
great run during the past few years.  
English plum puddings are also on the  
market. Cans of cooked green corn, beans,  
peas, tomatoes, cauliflower and asparagus,  
with Saratoga fried potatoes, are to be  
found on the shelves of every grocery,  
while laundries do the washing and ironing.

It is no longer necessary to be a cook, or  
to have a cook, to keep house. It requires  
scarcely any cooking utensils to provide a  
warm meal. A can-opener, a frying-pan  
and a coffee-pot are the principal requisites.  
Even the last is not absolutely necessary,  
since a mixture of prepared coffee, sugar  
and cream may readily be obtained. It is  
even practical now for the novice to dis-  
pense with a cook-book, as the label on  
every can tells how to treat the contents.  
Surely, ladies need no longer complain that  
the labors of housekeeping keep them from  
cultivating their minds.

### News from Boston.

"I have followed the piano (the Mason &  
Hamlin) ever since the first model was laid  
on the table with great and growing inter-  
est." "I can affirm with positiveness, from  
my own observation, that the very best ma-  
terial the world affords is used by the Mason  
& Hamlin company, and that the workmen  
they have gathered together in their piano  
factory are of the same high class that has  
contributed so largely to their great favor  
as organ-makers for the last thirty years."  
"No instruments could be put together with  
greater nicety and care." "Owners are de-  
lighted with tone, finish, workmanship and  
wear, and especially with the way the piano  
stands in tune." (A gentleman in Topeka  
has used one over a year, it has not been  
tuned, and does not now need tuning.)  
"The piano will stand at concert pitch and  
never fall if it is used a hundred years."  
The above are extracts from a letter of a  
prominent Boston pianist and tuner (John  
Gordon) to a gentleman in this city. Cer-  
tainly no finer or better pianos or organs  
can be made than the Mason & Hamlin.  
The agents for Topeka are Lyman & Con-  
row, 803 Kansas avenue.

The peach seems to exhaust the soil with  
remarkable prodigality.

Lard, if applied at once, will remove the  
discoloration after a bruise.

# The Young Folks.

## Nature.

All Nature, ever new, makes study new. No finite mind can see the Everywhere. There is a Presence only souls which dwell Above untrodden heights, with eyes unsealed And ears unstoppered can see or feel or know. Yet all who will may clasp the Hidden Hand, Nor fear to meet the Universal Eye. Some ears can hear soft whisperings in space. And voiceless songs and hymns and elegies. Some eyes can see the images that sleep Unhewn in marble blocks. Some hands can clasp Impalpable and fleeting forms that fade Upon appearing. Adoring, let us walk, in holy wonder, down The aisles of sacred groves; 'mid grassy plains, By ocean's shores, and hear the wordless voices Of wave and leaf; and upward look in hope, And rest in nature's lap, and feel and hear The beatings of its omnipresent heart. In nature's endless panoramic flight Are words which God has framed and left as thoughts. Midst changing shadows of a changing light, And praise of psalming winds that mold the hills As altars where the angels kneel—amidst The clouds that veil celestial forms that come From far, we, too, have place to live and die. Yet death is blinded life, so nature says. In changeable nature is our changeless God. At nature's opening gate we stand to see What all life is—here and everywhere. With folded hands and bowed head we wait For God to lead us where life is all.

—Rev. W. H. Platt.

## Death on the Battlefield.

Almost every death on the battlefield is different. And the manner of the death depends on the wound and on the man, whether he is cowardly or brave, whether his vitality is large or small, whether he is a man of active imagination or is dull of intellect, whether he is of nervous or lymphatic temperament. On the second day of the battle of the Wilderness, when I fought as an infantry soldier, I saw more men killed and wounded than I did before or after the same time. I knew but few of the men in the regiment in whose ranks I stood, but I learned the Christian names of some of them. The man who stood next to me on my right was called Will. He was cool, brave and intelligent. In the morning, when the 2d Corps was advancing and driving Hill's soldiers slowly back, I was flurried. He noticed it, and steadied my nerves by saying kindly:

"Don't fire so fast. This fight will last all day. Don't hurry. Cover your man before you pull your trigger. Take it easy, my boy, take it easy, and your cartridges will last longer."

This man fought effectively. During the day I had learned to look up to this excellent soldier, and lean on him. Toward evening, as we were being slowly driven back to the Brock road by Longstreet's men, we made a stand. I was behind a tree firing, with my rifle barrel resting on the stub of a limb. He was standing by my side, but in the open. He gave a groan, doubled up, and dropped on the ground at my feet. He looked up at me. His face was pale. He gasped for breath a few times, and then said, faintly: "That ends me. I am shot through the bowels." I said: "Crawl to the rear. We are not far from the intrenchments along the Brock road." I saw him sit up, and indistinctly saw him reach for his rifle, which had fallen from his hands as he fell. Again I spoke to him to go to the rear. He looked at me and said impatiently: "I tell you that I am as good as dead. There is no use in fooling with me. I shall stay here." Then he pitched forward, dead, shot again, and through the head. We fell back before Longstreet's soldiers and left Will lying in a windrow of dead men.

After Longstreet's soldiers had driven the 2d Corps into their intrenchments along the Brock road, a battle-exhausted infantryman stood behind a large oak tree. His back rested against it. He was very tired, and held his rifle loosely in his hand. The Confederates were directly in our front. This soldier was apparently in perfect safety. A solid shot from a Confederate gun struck the oak tree squarely about four feet from the ground, but it did not have sufficient force to tear through the tough wood. The soldier fell dead. There was not a scratch on him. He was killed by concussion.

During the first days fighting in the Wilderness, I saw a youth of about 20 years skip and yell, stung by a bullet through the thigh. He turned to limp to the rear. After he had gone a few steps he stopped, then he kicked out his leg once or twice to see if it would work. Then he tore the clothing away from his leg so to see the wound. He looked at it

attentively for an instant, then kicked out his leg again, then turned and took his place in the ranks, and resumed firing. There was considerable disorder in the line, and the soldiers moved to and fro, now a few feet to the left, now a few feet to the right. One of these movements brought me directly behind this wounded soldier. I could see plainly from that position, and he pushed into the gaping line and began firing. In a minute or two the wounded soldier dropped his rifle, and clasping his left arm, exclaimed:

"I am hit again!"

He sat down behind the battle ranks and tore off the sleeve of his shirt. The wound was very slight, not much more than skin deep. He tied his handkerchief around it, picked up his rifle, and took position alongside of me. I said:

"You are fighting in bad luck to-day. You had better get away from here."

He turned his head to answer me. His head jerked, he staggered, then fell, then regained his feet. A tiny fountain of blood and teeth and bone and bits of tongue burst out of his mouth. He had been shot through the jaws; the lower one was broken and hung down. I looked directly into his open mouth, which was ragged and bloody and tongueless. He cast his rifle furiously on the ground and staggered off.

The next day, just before Longstreet's soldiers made their first charge on the 2d Corps, I heard the peculiar cry of a stricken man utters as the bullet tears through his flesh. I turned my head as I loaded my rifle, to see who was hit. I saw a bearded Irishman pull up his shirt. He had been wounded in the left side just below the floating ribs. His face was gray with fear. The wound looked as though it was mortal. He looked at it for an instant, and then poked it gently with his index finger. He flushed redly, and smiled with satisfaction. He tucked his shirt into his trousers, and was fighting in the ranks again before I had capped my rifle. The play of the Irishman's face was so expressive, his emotions changed so quickly, that I could not keep from laughing.

Near Spottsylvania I saw, as my battery was moving into action, a group of wounded men lying in the shade cast by some large oak trees. They silently looked at us as we marched past them. One wounded man, a blonde giant of about 40 years, was smoking a brier-wood pipe. He had a firm grip on the pipe-stem. I asked him what he was doing.

"Having my last smoke, young fellow," he replied.

His dauntless blue eyes met mine, and he bravely tried to smile. I saw that he was dying fast.—Frank Wilkeson, in "Recollections of a Private Soldier."

## Interesting Scraps.

A lady at Sanford, Fla., has 100 varieties of roses in her flower garden.

Toads are an article of merchandise in Paris, being kept in tubs and sold at the rate of two francs a dozen.

It takes the tusks of 75,000 elephants per year to supply the world's piano keys, billiard balls and knife handles.

It is said that 600 Chinese in New York are now members of the Knights of Labor, and that many more are about to join the order.

An English lady sent to the Pope an Easter egg of ivory, lined with white satin, and the yolk is a gold case, in which is a large ruby set in diamonds. This trifle cost \$10,000.

The coffee tree is an evergreen, and grows from eight to thirty feet high, commencing to bear in three or four years and continuing to bear from seventy-five to one hundred years.

Supernumerary toes and fingers are said to be of quite frequent occurrence among certain African tribes. Dr. Stockly mentions the case of a Caffre, 18 years old, who had six fingers on each hand. His parents, four sisters and a brother had the same, and his mother had also a double series of toes on both feet.

Heart disease is an affection to which nine-tenths of the animals in confinement are subject. Among elephants the most common and fatal of many diseases is rheumatism; monkeys and baboons generally die from bronchial affections and heart diseases; felines, such as lions, tigers, leopards, etc., from dysentery and heart disease; deer, antelope, etc., suffer most from dysentery and

heart diseases; while wolves, dingoes, foxes and other canines seem to be subject to no particular disease.

The great Mexican volcano, Popocatepetl, has just been remeasured and found to be 17,800 feet above the sea. The crater, which is completely obscured within by sulphurous vapor, is about two and one-half miles in circuit and 1,000 feet deep. The entire center of the top of the mountain seems to be solid sulphur, which is deposited at the rate of a ton a day.

The giant Winckelmeler, who is now exhibiting in France, is eight and a half feet high. A noteworthy instance of a very small and perfectly developed dwarf is the celebrated Borulawsky, who was born in 1789 and died in 1837, and never was over twenty-nine inches in height. These two examples are selected by *La Nature*, of Paris, as an illustration of the extremes between which human stature ranges.

A novel and valuable application of photography has been made by the Century Company, combining the complete preservation of valuable copy against accidental loss or injury by fire of otherwise with the greatest convenience in storage or handling. Over 25,000 sheets of copy of a work on its way through the press, with interlineations, corrections and additions, have been photographed on a reduced scale of only 1 1/2 x 2 inches to the page, but easily legible upon magnification.

The famous Pictured Rocks on the Evansville pike, about four miles from Morgantown, W. Va., have been a source of wonder and speculation for more than a century, and have attracted much attention among the learned men of this country and Europe. The cliff upon which these drawings exist is of considerable size, and within a short distance of the highway above mentioned. The rock is a white sandstone which wears little from exposure to the weather, and upon its smooth surface are delineated the outlines of at least fifty species of animals, birds, reptiles and fish, embracing in the number panthers, deer, buffalo, otters, beavers, wildcats, foxes, wolves, raccoons, opossums, bears, elk, crows, eagles, turkeys, eels, various sorts of fish, large and small snakes, etc. In the midst of this silent menagerie of specimens of the animal kingdom is the full length outline of a female form, beautiful and perfect in every respect. Interspersed among the drawings of animals, etc., are imitations of the footprints of each sort, the whole space occupied being 150 feet long by fifty wide. To what race the artist belonged, or what his purpose was in making these rude portraits, must ever remain a mystery, but the work was evidently done years ago.

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# KANSAS FARMER.

ESTABLISHED IN 1868.

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It would afford us much pleasure to attend all the college commencements to which we have been invited.

One hundred and twenty-three new Granges have been organized in the United States so far this year, against ninety-one for all of last year.

We made a mistake of one figure in our crop reports last week. Where we estimate the corn crop of 1887 to be 2,500,000,000 bushels, one cipher too many was used. It ought to have been 250,000,000.

If every farmer would cultivate no more ground than he can attend to properly, and put that in the best possible condition and keep it so, the farmer himself would be better off and the nation that much richer.

Farmers ought to have an abundance of green clover for their hogs. Good clover pasture with a little cornmeal will keep hogs growing fast and all the time fat enough for good meat. If we had more grass for our hogs we would have less disease among them.

Cherry stones that have been well kept through the winter for planting, may be planted in drills covering fully an inch deep with soil, then scatter coarse straw over the drills and leave it there until the young seedlings are well up, and longer if it does not interfere with cultivation.

The ninth annual session of the Inter-State Sunday School Assembly will be held in Forest Park, Ottawa, Kansas, commencing June 15 and ending on the 29th. Vast improvements have been made since adjournment of the last session, and indications point favorably to the greatest concourse of people at this session ever witnessed in the West. The attractions are greater than ever before offered. Nearly 400 tents have already been engaged.

It is said that a good way to prepare, test and preserve cherry stones for seed is to gather them when freshly separated from the fruit, throw them into plenty of cold water and set in the shade for three weeks, stir them up every few days, adding fresh water. All seeds that float are no good and may be thrown away. Then wash clean and put a layer of them, not over three inches deep, in a wooden box, having holes in it for drainage. Cover, and bury under a few inches of soil close to the wall on the north side of a building, and there leave them, through the winter.

### CHANGE OF OWNERSHIP.

Ex-Governor Samuel J. Crawford and Hon. J. B. McAfee, on the first day of the present month became owners of an undivided interest in the KANSAS FARMER, having purchased from Prof. DeMotte. The remaining interest is still retained by Mr. Heath, the business manager.

Prof. DeMotte hesitated a long time between calls made upon him in Illinois and his interests in this paper, and finally surrendered to those who have been besieging him there. During a period of twenty-one years he was connected with Wesleyan University at Bloomington, Illinois, and two years ago he was chosen President of Chad-dock college at Quincy. Recently he was appointed Superintendent of the Soldiers' Orphans' Home at Normal, and Mrs. DeMotte, his wife, was at the same time chosen Matron of the Home. The Bloomington *Pantagraph* says: "When his name was first spoken of as Superintendent of Home, Dr. DeMotte seemed adverse to accept the place, but his intimate and old friends here urged him to accept, and they did this because they believed his influence upon the girls and boys at the Home would be a grand thing for the future of these orphan wards, and that Dr. DeMotte was specially and peculiarly fitted both by nature and by experience for this very important work. \* \* \* With Dr. DeMotte and his wife installed as manager of the Home, two things are fully assured, namely: a high degree of economy and thrift in the financial department of the Home, and, second, a kind, considerate and efficient management of the inmates in matters of discipline. All who know Dr. and Mrs. DeMotte will consider the board fortunate in securing their services."

Having accepted that position, he consented to part with his interest in the KANSAS FARMER to the gentlemen above named, and it is altogether safe to say that the Soldiers' Orphans' Home gains much in acquiring such competent managers, the KANSAS FARMER gains quite as much as it loses. The new owners are old Kansans, both of them reared on farms, and one of them is now actually engaged in practical agriculture on his farm near Topeka.

Mr. Crawford was Governor of Kansas from 1865 to 1869. The last ten years he has been continuously engaged in representing the land interests of Kansas at Washington. Through his efforts a very large area of public lands in the State have been restored to the people. Mr. Crawford owns some valuable property in Topeka, and intends to erect a new five-story block this summer to be known as the "Kansas Farmer Block." Governor Crawford is in full accord with the policy and purposes of the paper and will give to its support and maintenance as much of his means and attention as may be needed to increase its circulation and enlarge the circle of its influence.

Mr. McAfee is now one of the three members of the Legislature from Shawnee county. He held the same position one term next preceding the last. He owns a large farm, with some of the best stock in the State, just west of the city of Topeka. He is a gentleman of fine intellectual acquirements, of excellent personal habits, and a first-class farmer.

The business management will remain as it was. Mr. Heath is an earnest, active, persistent worker. With such backing and such management, the paper has better directing power than it ever had, for the new men intend to "push things," but they are abundantly able to bear the strain of all necessary outlays. Our readers may

confidently expect improvements in the paper within the present year and redoubled efforts for the years to come.

### FROM KANSAS TO EUROPE.

Readers of the KANSAS FARMER will remember that this paper has advocated the opening of trade avenues direct between Kansas and Europe, and that when the Atchison, Topeka & Santa Fe railway company purchased a Texas railroad system and connected it with Kansas, our readers were encouraged to believe that the movement would prove to be of great value to the farmers of this State in particular and to all the people generally, for the reason that, as it then appeared to our minds, it was opening the great highway which we so much needed. It seems that we were very near the truth, for now it is asserted that the Santa Fe company is about to establish a weekly line of steamers between Galveston, Texas, and Liverpool, England. The company owns dock facilities at Galveston which will be improved for the purpose named.

This is a matter of very great importance to the people of Kansas. It will put them, using commercial language, as near to Liverpool as they now are to New York. That is to say, grain, flour, meat, etc., can be carried from Kansas to Liverpool at rates about the same as those charged for transportation of like articles to New York City, and it will amount to a difference of 5 cents a bushel on wheat and 25 cents a barrel on flour. The distance between Topeka and New York city is nearly twice as great as that between Topeka and Galveston. Chicago is about the same distance from Kansas that Galveston is. Take a map of the United States, place one foot of the dividers on Wichita, Kas., and the other on Chicago, Ill.; then describe a circle with that radius. It will be found that Galveston, Texas, is very nearly on the line. This fact is an important one in relation to the trade of Kansas.

The rapid development of our railroad system had the effect to bring distant points nearer, and relatively to put nearer points farther away. It almost wholly destroyed commerce on the waterways by a competition that was sustained only by charging interior and non-competitive points more than was reasonable for services rendered them. Out of this grew a system of discrimination distasteful as well as generally injurious to the people. It took away from small towns trade that belonged to them naturally, and placed it in certain cities; it prevented that just distribution of business to which the people are entitled and concentrated it in particular places. The people determined that such a policy should not be permitted to remain, and the inter-State commerce law was the result. That law, with such modifications as may be found necessary to perfect it and more easily and efficiently enforce its fundamental provisions, will establish a better system. It will tend to equalize burdens, and while it may occasion some temporary inconvenience and loss to particular persons and places, it will be better for the carriers and for the people in general. It will effect a more equitable division and distribution of business; it will make the trade of "way stations" more important and afford to the public more and better facilities for trade, for it will encourage the development of local manufactures and markets.

In harmony with that idea is the opening of this new outlet to the south of us. Under the old system, it would be difficult for farmers in Kansas to avoid the city of New York on their way to Liverpool, because a company that is interested in that city or in

eastern property would work to destroy all competition in this quarter and make up losses by charging intermediate and non-competitive points more than is fair. That cannot be done now, and it will never be permitted in the future. This new route from Kansas to Europe will be opened and people of Kansas will then have an easy and direct outlet on reasonable terms; they can ship their surplus products to Chicago, to St. Louis, to Memphis, to New Orleans, to New York or to Liverpool, as it may best suit their plans. It will have the effect to change the current of a large part of our produce. And it will do more. It will encourage the investment of means in Kansas manufactures. It will make business for us; it will not only afford us better facilities for getting to distant markets, but it will aid in securing better markets for us at home.

### The Kansas State Fair.

All arrangements were perfected some time ago for holding the State Fair September 19 to 24 inclusive. This is just what it appears to be, a State Fair. The county of Shawnee, under authority of an act of the Legislature, purchased the grounds owned by the State Fair Association, which, added to what the county already owned, affords abundant room for fair purposes. The grounds used the last few years for the State Fair are now all owned by this county and will be kept and managed for the use here indicated. But the Fair is not a county matter. It will be held under the management of the State Fair Association, with Hon. E. N. Morrill, Brown county, President, Gen. J. L. McDowell, Riley county, Superintendent, ex-Senator Finch, Osage county, Assistant Superintendent, ex-Sheriff Chester Thomas, of Shawnee county, Secretary, and C. H. Titus, of Topeka, Assistant Secretary. Directors of the different departments have been appointed, and Col. H. C. St. Clair, of Sumner, is to have charge of county displays.

We regard the State Fair as of very great value to the people of Kansas in general. It operates as an advertisement of the State which cannot be as well presented in so condensed and practical a form in any other way. We expect to see it become an institution of Kansas, fixed and regular as the meeting of the Legislature, so that our citizens and especially our young people may calculate upon its annual recurrence with certainty.

A State Fair is a State school where the farmers are teachers, using grain, fruit, vegetables and living animals, of their own growth and rearing, as factors in great object lessons, with people of all civilized states and nations as pupils. We ourselves, in Kansas, are quite as much benefited as any others. Aside from the advertising advantages, its moral effect upon our farmers is of inestimable value. Farmers need some force to develop their energies and powers and to bring them together occasionally. We submit that every farmer in the State has an interest in the State Fair, and we submit, further, that every county ought to be represented in some organized way. One man cannot take a whole county on his shoulders and bring it here; but if one man will get nine other men to help him and they get ninety others to help them, the one hundred can easily handle the county.

It is easy to get to Topeka now; we have railroads coming in from all the cardinal directions, and they will be equally interested with the people in making rates for transportation low enough to suit the occasion. It would be a great thing for Kansas to have the best fair at Topeka this year ever held west of St. Louis. It can be done, if the farmers will join heartily in the movement.

Farmers in southern Kansas began the wheat harvest last Monday. It is important that every kernel be saved this year if possible. The acreage is small, and the average yield will not be large. Do not postpone the day of beginning beyond the fair ripening of the grain, and secure it from danger of rain as soon as it can be done. There is a great deal of wheat lost every year through carelessness in this respect. Kansas weather, during harvest time, is quite generally good, and farmers rely too much on that fact. When a change does happen, it comes suddenly, and it does not require a long wetting to injure wheat. The only safe plan is to get the wheat into stack or under roof as soon after cutting as is safe.

It is suggested by an old and successful farmer that the former plan of seeding orchards to grass is not now a good one and that it ought to be abolished, and he would substitute cultivation of the ground. He thinks Western climate is hard on fruit trees, and that, in connection with insect depredations makes it important that all possible assistance should be given to the tree, which is not done when the soil is required to produce a crop of grass as well as a crop of fruit. He proposes, as a rule: "Cultivate the young orchard reasonably well, keep it free from borers and other destructive agencies so far as in your power, until old enough to fruit. When fruit has set and developed sufficiently, so you know it will stay, cultivate the ground most thoroughly, and thus give the trees a chance to bring the fruit to the highest attainable degree of perfection, and also build up the trees in all their parts by storing up nutriment in their roots, stems and branches for a vigorous growth of wood and another crop of fruit the next season."

Mortimer Whitehead, Lecturer National Grange, whose address is Middlebush, N. J., sends us some matter this week, among the most important of which is the following presentation of census figures: "In 1790 one-thirteenth of the population of the United States lived in cities of 8,000 inhabitants and over; in 1800, one-twenty-fifth; in 1810 and also in 1820, one-twentieth; in 1830, one-sixteenth; in 1840, one-twelfth; in 1850, one-eighth; in 1860, one-sixth; in 1870, a little over one-fifth; and in 1880 nearly one-fourth. From 1790 to 1880 the whole population increased twelve fold, the city population eighty-six fold. From 1830 to 1880 the whole population increased a little less than four fold, the city population thirteen fold. From 1870 to 1880 the whole population increased 30 per cent., the city population 40 per cent. During the half century preceding 1880 population in the city increased more than five times as rapidly as that of the village and country. In 1800 there were only six cities in the United States which had a population of 8,000 or more. In 1880 there were 286."

**The Way the Wind Blows.**

A dispatch from St. Louis, under date June 4 inst., shows the beginning of the end as to the long and short haul business, and it shows so plainly how the wind is blowing that we give it to our readers without a word of comment. It is as follows: "The Chicago, Burlington & Quincy Railroad company have determined to reduce their rates between this city and Council Bluffs and Omaha. When the inter-State law went into effect this road, being a long route to Council Bluffs and Omaha, rather than sacrifice their local points under the new regulation, raised its rates to the former places about 15 per

cent. After two months of trial it found this business of too much consequence to lose. A return to the old rates will necessitate a slaughter of local rates all along the line. This is believed to be the first step in turning the tide of inter-State regulation in favor of shippers, and intermediate points may find the long and short haul a very good thing after all."

**State Quarantines.**

Is not this State quarantine business going a little too far? Is it not doing more harm than good? Is it not causing a great deal of unnecessary trouble, and is it not giving American cattle a bad reputation abroad? There ought to be some general system of dealing with contagious diseases among animals, it ought to be made efficient through prompt and powerful agencies, and it ought to apply in all parts of the country. At one time, within a year or so, there were half a dozen State quarantine laws in force. It is time to wholly do away with State lines in all such cases. One efficient national organization with jurisdiction in every township in the United States is the only safe, economical and effective machinery to handle this important matter. And we must get to that soon. Then, when disease is reported, the case will be examined at once, and if further action is necessary, the particular locality will be quarantined and the rest of the country will be let alone. Instead of Governors' proclamations going out in official channels, exciting cattle interests in all the country and further damaging us abroad, the Agricultural Department will treat the case as health officers treat a case of small-pox or yellow fever. We need better treatment with less fuss. Let Congress take entire charge of the matter, and let every State give all possible assistance.

We are in receipt of a circular letter addressed by Commissioner Colman to the managers of all railroads and transportation companies in the United States, calling their attention to the existence of pleuro-pneumonia among cattle in the States of Illinois, Maryland and New York, and asking their cooperation in making effectual the quarantines already declared. He "suggests" and "requests" the companies to attend to some specified sanitary regulations. The law ought to regulate all this, so that nothing would be left for discretion under requests and suggestions. The farmers of the country ought to unite in demanding efficient Congressional action and in crying down the jealousy of State rights advocates. Let us establish some general system that can be operated at any time and in any part of the country without making a noise that all the world hears.

**Weather Report for May.**

Prof. Snow's weather report for May says: The chief meteorological features of this month were high temperature, clear skies, and deficient rainfall. There have been five warmer Mays on our twenty years' record, but no May of the entire list has yielded so slight a rainfall. The small amount of rain, however, was so well distributed that the staple crops at the end of the month are suffering no perceptible injury.

**Mean Temperature**—Sixty-seven and eighty-eight-hundredth deg., which is 2.55 deg. above the May average. The highest temperature was 91.5 deg., on the 7th; the lowest was 45.5 deg. on the 1st, giving a range of 46 deg. The mercury reached 90 deg. only once. Mean at 7 a. m., 62.26 deg.; at 2 p. m., 77.59 deg.; at 9 p. m., 65.82 deg.

**Rainfall**—One and twelve-hundredth inches, which is 3.19 inches below the

May average. Rain in measurable quantities fell on seven days. There were two thunder showers. The entire rainfall for the five months of 1887 now completed has been 10.01 inches, which is 2.14 inches below the average for the same months in the preceding nineteen years.

**St. Louis Wool Market.**

We quote from Hagey & Wilhelm's wool circular:

Our market receipts show a heavy increase over last season and buying is more active than ever before. Prices have gradually strengthened since the opening of the season, under heavy demand, and all advances in values have been sustained, thus showing a healthy condition of the market and good indications for the future.

TUBWASHED.	
Fancy.....	37a38
Choice.....	34a36
Fair.....	31a33
Common.....	30a31
Low and coarse.....	28a29
TEXAS AND INDIAN TERRITORY.	
Medium, 12 months.....	25a27
Medium, 6 to 8 months.....	23a25
Fine, 12 months.....	22a24
Fine, 6 to 8 months.....	20a22
Medium, fall clip.....	20a22
Fine, fall clip.....	18a20
Short, sandy, dark.....	11a16
UNWASHED.	
MISSOURI, ILLINOIS, IOWA AND EASTERN.	
Choice 3/4 and 3/8-blood.....	30
Medium.....	27a28
Fine.....	23a24
Braid.....	21a23
Common and mixed.....	20a22
Burry.....	18a22
Pulled.....	16a19
KANSAS AND NEBRASKA.	
Choice 3/4 and 3/8-blood, bright, light.....	25a27
Medium, bright, light.....	23a25
Low medium, bright, light.....	20a22
Dark, heavy medium.....	18a21
Light fine.....	20a22
Heavy fine.....	18a20
Bucks and heavy Merino.....	15a18
Carpet.....	14a17
Common.....	16a19
Pulled.....	16a19
COLORADO, MONTANA, WYOMING AND TERRITORY.	
Choice medium.....	25a27
Fair medium.....	23a25
Fine medium.....	21a23
Low medium.....	19a21
Choice fine.....	20a22
Average fine.....	17a20
Short and sandy, mixed grades.....	15a18
Carpet.....	14a17
Hatters' stock.....	10a12

**Kansas Chautauqua Assembly.**

July 19th to 28th there will be held in Garfield park, Topeka, the third session of this assembly. Extensive preparations are being made for it. The usual reduced rates on the several railroads will be made; board can be had on the ground at \$5.00 a week; tents and cots will also be provided. There are six departments, viz: Assembly Normal Union, School of Theology, Primary, Chorus Training, School of Oratory, School of Languages. The instructors are among the very best connected with the great Chautauqua movement, such as J. B. Young, A. M. of Pennsylvania; Dr. DeMotte and wife, of Illinois; Dr. Ridpath, the historian, Dr. Hoss, Dr. Marvin and Dr. Gobin. The celebrated Modoc Club will give a concert; Marshall's Band will give three of their famous evening concerts; the Assembly Choir, led by Prof. M. C. Holman, will give five song services. There will be in all sixteen lectures, several of them illustrated. Among the lecturers we notice G. W. Miller, D. D., of Brooklyn, J. M. Reid, D. D., of New York, A. J. Kynett, D. D., of Philadelphia, J. B. Newman, D. D., of Washington, D. C., Dr. Fry, of St. Louis, Dr. Adams and Dr. Bartholomew, of Illinois.

There will be a book store, grocery store, post office, etc., on the ground. For program and full particulars address the Secretary, L. A. Rudisill, Topeka, Kas.

The best time to cut timothy and clover is when they have reached the full stage of bloom and are going out—just before the stalk begins to dry out and harden.

The *Western School Journal* has changed hands. Prof. R. W. Turner, late of Jewell county, is now managing editor. Every teacher in Kansas ought to have the *Journal*. It is a good educator.

**Inquiries Answered.**

**GOPHERS.**—A correspondent replies to Mr. Stewart: I can catch a gopher every time. I set a trap inside of twelve hours. Let the mouth of their den alone, but spade down some two or three feet away from the mouth till you strike their run-way; then clean out all loose dirt, set your trap, cover over the top with a dark board, then dirt to exclude the light, and you will get him.

**USE OF SCHOOL HOUSES.**—In the school law, where it says school district boards are authorized to open the doors of the school house for religious, political, etc., purposes, can a majority of the board shut the door against such; or does the law mean, they shall and must open for the public benefit?

—The intention of the law is, that rural communities shall not be deprived of the use of a building for public meetings of the character named. The directors are to exercise a reasonable prudence in the matter to see that the public is fairly treated, and that the school house shall not be misused. It must not be let to a rabble or disreputable assembly. Meetings must be of an orderly character and of good intent. It is not expected that the board will refuse, indeed, they may not lawfully refuse, to permit the use of the building for the purposes named in the law.

**STONES FOR MANURE.**—A German chemist, Julius Hensel, says that manuring with stones and rocks will improve the soil wonderfully, as it is just what the soil needs. The stones and rocks ought to be crushed before they should be plowed on the fields. Some farmers in Germany, Norway and Sweden have already made some trials and found it first rate. I would be glad to hear your and other people's opinion about this new method.

There is nothing new in the theory. The writer of this, near fifty years ago, sowed "plaster"—ground gypsum—on wheat and clover, and dropped it by handfuls on corn hills. Limestone is sometimes ground and spread in the same manner, but it is much better when burned to lime, so that it will slack by operation of the atmosphere. Soil is decomposed rock. Soil in valleys is fertilized by washings from the hills, and often the hill soil is but disintegrated rock.

The Lincolns are the largest breed of sheep in the world, having, in some instances, attained a dressed weight of nearly 400 pounds. They yield a beautiful fleece of lustrous wool about ten inches in length and weighing from eight to fifteen pounds. They are not popular in this country, because they require too much care to suit the ordinary farmer.

A farmer residing near Fairfield, Iowa, started a fish pond four years ago with three German carp, about two inches long and very small. He now reports his stock at 12,000, after having sold hundreds for stocking ponds in other parts of the State. The fish are said to be as tame as chickens, and a source of great pleasure to the family. There is food for reflection in this statement for those who like carp.

To prepare mashed potatoes when ready to put to cooking, slice them in two lengthwise; if there is a clear streak through the center, cut out a three-cornered strip the whole length of each half, as this will not mash soft and smooth. When cooked, drain dry, mash with an old-fashioned masher until they begin to look creamy and smooth, then add cream and milk, nearly half a teacup full for six or eight potatoes, salt enough to give them the right flavor; no butter; milk alone is preferable.

A man's first duties are to his family and himself. The State should not make those primary duties more difficult by taxing any of the necessities of life. The necessity for the major portion of the enormous revenue needed by government arises from vice and folly in their various forms. The causes of taxation should bear the burden of taxation. All public revenues should be drawn from indirect taxes upon conduct and conditions more or less inimical to the general welfare. Luxuries, vices, follies, excessive wealth, and all conduct, either of citizens or foreigners, which tends to generate evil and injustice, should be taxed as far as practicable. Such a system of taxation would necessarily have a correlative effect, viz., the encouragement of virtuous acts by freeing them from public burdens.—*American Magazine*.

## In the Dairy.

### DAIRYING FALLACIES.

The discussion of the "globule" theory has brought out a re-publication of Dr. T. H. Hoskins' article printed in the *Rural New Yorker*, June 29, 1878. It is worth reproducing here. We copy it entire, as follows:

There have been great advances in the study of the scientific of dairying, during the last ten years. Large credit is due to a number of enterprising men, who have devoted both money and time to the investigation of milk and its products, and also to improving the methods of breeding, feeding and handling dairy stock. If I were disposed to criticise anything these investigators have done, it would be the haste some of them have shown to become instructors before acquiring a mastery of their subject. To this we owe much building with "untempered mortar" that has not endured; and, worse than that, the diffusion of erroneous notions among the people, harder to be overcome than a simple, teachable ignorance.

Anxious to avoid the fault myself, and yet desirous to point out what I am thoroughly convinced are serious errors, I shall touch briefly in this article upon some important practical points which have been misstated and misunderstood, and about which the popular mind is still adrift. I do this with some reserve, and only after more than fifteen years of practical study, joined to careful closet investigation of both the chemical and physical sides of the question. The public are often at a loss to decide where "doctors" and "professors" disagree; yet I believe that I shall make the points I touch upon sufficiently plain, and shall support my statements with such good reasons that most intelligent and well-experienced practical dairymen will agree with my conclusions.

#### AIR IN CREAM.

For some time it was thought (and churns to carry out the principle were introduced) that the passage of air into the cream during the process of churning promoted the separation of the butter. The idea is now exploded, and the churns are found only in garrets. I allude to it merely to show, in the light of what will be hereafter stated, how far away from any true conception of the facts the minds of many must have been when such a theory could have had currency.

#### WITCHES IN THE CREAM.

Not infrequently the correspondence columns of agricultural journals contain queries headed, "Why Don't the Butter Come?" or something equivalent, in which the writer details the painful effort of hours, and even days, over a refractory churnful of cream. Most inexperienced people meet with this trouble, and not a few, also, who have made a good deal of butter, and made it well, when all natural conditions were favorable. The idea expressed by some that the cream was "bewitched" is the last resort, the world over, for the explanation of uncomprehended natural phenomena. It is only in the clear, white light of science (knowledge) that the witch becomes totally invisible. She and the ghost are always best seen in the dark.

#### TEMPERATURE IN SETTING.

As lately as seven or eight years ago it was the universal teaching that the proper temperature for setting milk was in the vicinity of 60 deg. The best authorities agreed that at a higher temperature the milk would become sour before all the cream would come to the surface, while at a lower temperature it would never rise at all. When the Swedish method of setting in ice water was first reported in America it could

hardly obtain serious notice, so contrary was it to received notions. Now, it has been abundantly demonstrated that cream swims to the surface soonest in milk cooled nearly to its point of greatest density, or about 40 deg. This is, in itself, a great advance—probably the greatest single step that has been made in butter-dairying. Yet it was not made by a professor, but was blundered upon in practice.

#### THE "CURRENT" THEORY.

Some minds have a great fondness for mystifying plain matters. If one should see a quantity of apples going over a waterfall it would never occur to him that when these apples reached the still water below it would be necessary to "create currents" in the pool before the fruit would float to the surface. The fact that apples are lighter than water would be considered a sufficient reason why they should float upon it, and as it is a rule alike of philosophy and common sense that when we have a perfectly satisfactory reason for any occurrence it is folly to seek for any other, we should never think of a "current" theory. Having ocular evidence that a current submerged the apples, and that they came to the surface when the current abated, we should be satisfied. Now, the butter globule, though it is too small to be seen by the naked eye, is to the milk in which it swims what the apple in the case supposed were to the water. If we keep the milk in a state of agitation they do not rise; if the milk is at rest, and just in proportion as the rest is perfect, they swim to the top. The most rapid separation of cream takes place in that apparatus where the milk is quickest reduced to the proper temperature and most rigidly held there. Whenever you hear one of these "current" theorists holding forth, you will always find that he has a "new patent setting-can" in the ante-room, which he would like to show you. Remember the air churns and eschew him.

#### THE ANIMAL ODOR.

That the best butter is now made from cream raised in closed, and even in submerged cans, is what the boys call "a stcker" to those gentlemen who have long and learnedly held forth upon the pernicious "animal odor" in milk, which required the most careful ventilation to be rid of, and which absolutely ruined the flavor and keeping quality of the butter when retained. Various ingenious ways of getting around the stubborn fact are resorted to. It is hard, indeed, after having explained how this "odor" originates, what its chemical formula probably is, and how it looks or would look when isolated, to find it disappear all at once, like a will-o'-the-wisp. No doubt there are "stinks" in milk, but no doubt, also, they are got there from filthy bags and teats, filthy hands, foul air and the like. Pure, healthy milk has nothing in it that needs to be removed by ventilation. Ventilate your cow stables, keep your cows clean, give them good food and pure water, keep yourself and your surroundings clean while handling the product, from the udder to the butter tub, and you will never be troubled with the "animal odor." Another ghost has been laid, another "witch" has disappeared.

#### WASHING BUTTER.

Abundant experiment has shown that the natural flavor of butter cannot be removed by washing it with pure water. Careful manipulation, with the cream and everything else just right, will make good butter without washing. But the extra trouble is wasted.

#### THE "GRAIN" OF BUTTER.

When the butter has "come," and appears in little irregular masses, from a pin's head to a large pea in size, is the time to draw off the buttermilk and

wash the butter in the churn. This removes most of the buttermilk. After being then gathered and removed from the churn, worked, washed and salted on the butter-worker at the proper temperature, we find upon breaking it that it has a granular look. The mass seems to be made of little particles with a slightly glistening appearance. This is called the "grain." These small particles are partially kept apart by films of water (after salting this water becomes brine), and the peculiar texture thus imparted to the butter is a test of proper manufacture. Overchurn or overwork it, churn or work it at the wrong temperature, and the grain is gone, never to be restored; and with it is gone a large percentage of the selling value of the butter. Enough water (brine) must be retained to produce this appearance, which distinguishes "butter" from "grease." Consequently, the most perfect grain is obtained by washing in the churn before the butter is "gathered."

#### THE BUTTER GLOBULE.

To those who know nothing of the microscope and its revelations, a world remains hidden of which they can have little comprehension. To the naked eye milk appears a smooth, uniform fluid. To the eye, aided by the combination of magnifying glasses, called a "microscope," (seer of little things), it is a translucent fluid, in which float a multitude of shining globes, and these globes are butter in its primitive state. We do not make butter when we churn, although we say so. When the process of churning has been continued until we can see little particles of butter in the cream, we say "the butter has come," and the next proceeding (after washing) is to "gather it." But, in reality, churning is a single process. There is no difference between the "coming" and the "gathering," except that the latter is visible, while the former is invisible to the unaided sight. All that we do when we agitate cream in a churn is to throw the butter globules strongly against each other. If the cream is too cold, we may do this forever and produce no butter, for the same reason that we cannot work butter into rolls or prints when it is too cold. The globules are too hard to stick together. They merely rattle against one another in the churn, like peas in a bag. If the cream is too warm, we can churn them together and then churn them apart again, because they are in too fluid a state to hold together against the action of the churn. So no butter comes in either case—there are "witches in the cream." The true exorcist in such trouble is a thermometer.

#### MORE MYSTIFICATION.

The mystifiers have held high carnival over the butter globule. Nearly all of them (I do not know an exception among dairy "professors") declare that it has a shell, or envelop of membrane. Having created this shell (as the German philosopher created an elephant, "out of the depths of his moral consciousness"), they have as much trouble with it as they had with the "animal odor." Some tell us that the cream must be kept until acidity is developed, in order to weaken the shell. One has said that the churn must be so constructed as to have a grinding action upon the cream, for the same purpose. A good many have seen the shell, not only upon the globule, but after it has been ruptured and the butter has escaped. They describe it as accurately as they described the "animal odor" when concentrated into a "yellow oil," or as the old lady described the ague which the doctor made her throw up with a dose of lobelia. She said it "looked for all the world like the yolk of an egg."

And yet we know that we can make

butter as easily from sweet cream as from sour. We know that we can make butter as quickly by shaking cream in a plain, pine box as when agitated with the most scientific dasher ever invented. We know that at the right temperature we cannot carry a bottle of cream a few miles in a wagon box without finding butter there at the end of our journey. So far we have common sense *versus* inaccurate science.

If we go further, we shall find that while twenty years ago all physiologists thought they could see a membrane on the little globule (and nothing is more easy than to deceive one's self on this point in using an imperfect instrument, or a good one unskillfully) now more than half of those who have studied the question with ability declare it to be naked. It is really a difficult question to decide. Both optically, with the microscope, and by the use of chemical tests, the highest manual skill and the best mental ability are requisite in the determination of this apparently simple problem. But the writer hopes he may say, without undue egotism, that though "only an ordinary M. D. and farmer," he fifteen years ago, and several times since, has repeated, with many variations, a great variety of tests, both on the optical and chemical side of this "membrane" question, and concluded each time with a firmer conviction that the butter globules swim "bare-naked" in the serum of the milk, requiring forcible contact only, at the right temperature, to cause them to adhere to each other and form butter. When he began this study he was not aware that a single prominent scientist held any other view than that the butter globule had an envelop. Now he is happy in finding the majority upon his side, and he looks, in a few years, to see the point demonstrated, by some ingenious experiment, so that there can be no longer any dispute. Practically, it is already proved, since the practice of the dairy would not be at all modified by the demonstration referred to. Its operations are conducted exactly as though an envelop exists, and with perfect results.



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## THE REMEDY

must act on it. Tutt's Liver Pills act directly on that organ, causing a free flow of bile, without which, the bowels are always constipated. Price, 25c.

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SUPPLY

## Horticulture.

### The Rose, Culture, Enemies, Etc.

Extract from a paper by John Poste, before the Columbus (Ohio) Horticultural Society.

When you plant roses you desire an abundance of blossom and luxuriance of growth; to produce these results you must give the necessary conditions of soil, judicious pruning, climate and location.

Your soil, if not naturally so, must be converted as nearly as possible into a deep, porous loam; not too light and sandy, nor too stiff and cold a clay, a retentive but thoroughly-drained soil. Almost any soil can be brought to proper condition by spading the depth of fifteen inches, and incorporating with the natural earth well-rotted stable manure and sand if too heavy, and of well-rotted manure and clay and wood ashes if too light and sandy.

The rose is a hearty feeder, therefore will bear annual manuring, and as results are desired to follow annually also, none but well-rotted stable manure or sod should be applied, or such other stimulant as can be readily assimilated with the soil.

In planting in such a prepared bed, make your holes large enough to place the roots so as not to cramp them, then press well to the roots the earth first put in, but leave the surface dirt loose, so as to admit rain or such artificial watering as may be necessary in a dry time. An excellent liquid manure for watering the soil in immediate proximity to the roots can be made by soaking the scrapings of the chicken house in a barrel of water a few days before using.

Since the rose bears its blossoms only on the young shoots of the current year's growth (as with the grape), therefore in the spring cut back the last year's wood freely, entirely removing any dead and half-dead branches, and cutting back those you leave to the strongest buds; cut the unbranched shoots or canes to such a height as the bush is desired to be; each bud left will make a blossom-bearing branch, so don't be afraid to cut back, as from such you will get your finest blossoms.

Roses that bloom more than once during the summer, such as the Tea, Noisette, Bourbon, China, and the so-called Hardy Monthlies, or Remontants, should be pruned back after the first blossoming to a strong bud, then a vigorous new growth will start which will bear the next crop of blossoms. Never allow haws or seed capsules to mature on your bushes, for in bringing the seed to perfection they will so far sap the vitality of your plants.

Of the insect enemies of the rose I will first mention the slug, which by skeletonizing the foliage destroys nature's well-devised economy of atmospheric absorption through the leaves and their adjunctive assistants—the very lungs of the plant—thereby preventing that vigorous new growth which we have seen is absolutely necessary to the production of blossoms. Any dry dust or powder coming in contact with their slimy bodies will destroy them; having thoroughly applied the dust, whether it be road dust, lime or any of the powdered insecticides of commerce, after a few hours thoroughly syringe off the foliage and restore it to its normal condition of respiratory organs.

The green-fly, which, however, is most likely to prove troublesome in the conservatory, or to house plants, readily succumbs to tobacco water or smoke, or to immersion of the affected limbs in water as hot as the hands will bear. The red spider may be routed by systematic watering alone.

The bug which attacks the opening

bud fortunately is comparatively rare; it is best removed by hand-picking or eradicated by persistent syringing with any insecticide, or even pure water; but recollect that bushes from which dead and half-dead limbs and rubbish have been seasonably removed, and are getting proper food, are rarely much affected by any insect pests. Imperfect blossoms, stunted growth, a general consumptive appearance, are a mute appeal to you for better soil, more food and the removal of superfluous wood—the incubus of an unhealthy past. My long acquaintance with her majesty, our queen of the garden, enables me to promise you right royal favors in return for the tender treatment you will accord her.

### Evergreens.

The family of plants known as the Coniferae, or cone-bearers, is peculiar in possessing leaves of remarkable shapes and of wonderful duration. The members of the family which grow naturally in northern countries bear scale-like or needle-shaped leaves, as familiarly seen in the pines, spruces and the arbor vitae. In countries within the tropics the leaves of the conifers are usually wonderfully different from those with which we are acquainted. The leaves of the Chinese ginkho are almost exactly fan-shaped. With this diversity of form is also a great diversity in the duration of leaves. The ginkho sheds its leaves every autumn the same as do the maples and elms. So does our common larch or tamarack. Most of the pines and spruces hold their leaves for more than one year, however, and they are therefore "evergreen." Very few people know when evergreens shed their leaves, or even if they shed them at all. It is always desirable to know the habits of the objects which we admire. We can readily understand that if the pines and spruces bore but the leaves of one year's growth at a time, they would make a sorry appearance; the leaves are so very narrow that the tree would present a very thin and bald appearance. But nature, as if to remedy the poor effect of the slender leaves, has clothed the branches with the leaves of several or many seasons. And here is another striking fact: the spruces, which have much smaller leaves than the pines, hold their leaves much longer.

Every spring new shoots grow on the ends of all the branches of pines and spruces, and leaves are formed as fast as the shoot grows. In the early autumn these shoots with their leaves have attained their full growth. There will never be any more leaves formed on these young branches. Next year other shoots will push out from their ends and form leaves, but the leaves in these branches will remain the same, until, after some years, they die and fall. We can readily tell by the looks of the branches of the pine or spruce where the growth of each succeeding year has ended; then it will be an easy matter to count back the years on any long branch and see how old the leaves must be. Let us begin on a young, common white pine, in fall, winter or spring, when the young shoots are all matured. The last growth of a foot or two on the ends of the branches will represent one year, the year's growth back of that—the second year, the growth back of the second will represent the third year, and that still back of the third will be the four-year-old wood; but on this four-year-old wood there are no leaves. Then we have proved that the leaves endure for three years. If now we should closely watch the tree in the summer we should see the leaves on the oldest wood drop off while fresh leaves were forming on fresh-growing shoots. Some pines hold their leaves

but one year, some two and some three. The Norway spruce often holds its leaves for nine years, and so also does the black spruce. The spruces do not shed their leaves so regularly as do the pines.—Country Gentleman.

### Horticultural Notes.

In vegetable-growing, says an exchange, deep, rich soil is of the first importance. Soil can not be too rich or too deep, if we would have good vegetables.

It is estimated that four-fifths of all the apples exported from this country are of the Baldwin variety, which is said to do better in Massachusetts than anywhere else.

Gardening is profitable when the soil is not of too cold a nature and the market is not at too great a distance. One of the essentials is to plant early and to grow nothing but good varieties.

Carrots and onions are two crops easily destroyed by grass or weeds when the seed is germinating and just beginning to push through the soil. The hoe must be used, while hand-working the plants is sometimes necessary.

To prevent weeds growing in the walks, the use of the following solution is recommended: One part low grade carbolic acid in 100 parts of water, applied in a spray form. Guard the hands and permit none of the solution to go against the grass or box edgings.

By spraying orchard trees with Paris green just after the petals have fallen from the blossoms, as often described, not less than three grievous enemies to apple-growers could be squelched at this period besides the codling moth, viz., the newly-hatched bark-louse, the canker-worm and the tent-caterpillar.

Evergreens may be transplanted a little later than it is safe to reset deciduous trees, in fact, any time before the new growth commences, and again in the summer after the new growth becomes hardened. In handling these, use extreme care to keep the roots from drying; as in all good planting the ground is to be well firmed about the roots.

Sometimes it happens that geraniums from late spring cuttings, planted in rich, moist soil, grow all to leaf and yield but a few flowers. To do better than this, they should become pot-bound and show bloom before planting out. Planting pots and all is of doubtful benefit. Better have the soil less rich, but practice deep-digging. With a moist season and rich soil, no geraniums fare as well. Old, cut-back plants, full of shoots and bloom, planted out the latter part of May, should flower well all summer.

Dandelion is a wholesome vegetable used as salad or boiled like spinach. For salad, use only the delicate young leaves, just after they appear among the grass. For cooking, either the young or full-grown leaves may be used. Clean and wash the leaves well, as there is usually fine sand or earth between them, and let them stand in cold water for two hours. Drain them, and throw them into boiling salted water, and boil for twenty minutes, if young, and half an hour if full grown. Put the leaves in a colander, and press them to extract all the water, and then chop them fine. Put in a stewpan two ounces of butter to two quarts of leaves, and set it over a brisk fire. As soon as the butter is melted, sprinkle in a tablespoonful of flour and some salt and pepper. Add the dandelion, stir until thoroughly heated, and then moisten with broth or milk, and serve.

Stewart's Healing Cream, for chapped hands, face, or gentlemen to use after shaving. The cheapest and best article for the purpose in the world. Please try it. Only 15 cents a bottle at drug stores.

## Hedge Plants by 1,000,000

KANSAS STATE NURSERY, North Topeka, Kas.

**STRAWBERRIES - RASPBERRIES**  
Send five 2-cent stamps for my new *Small Fruit Manual*, with prices for plants for 1887. It is a complete guide to small fruit culture, with illustrations of old and new fruits. B. F. SMITH, Lock box 6, LAWRENCE, KAS.

**J. L. STRANAHAN & CO.,**  
**BROOMCORN - COMMISSION - HOUSE.**  
References:—P. B. Weare Commission Co. and Hide & Leather National Bank, Chicago.  
194 Kinzie street, CHICAGO, ILL.

## Trees! Trees! Trees!

We are Headquarters for **FRUIT TREES** and **PLANTS**; also **RED CEDARS** and **FINEST TREE SEEDLINGS** for Timber planting and Nursery. Largest Stock! Lowest Prices! Write us for Price Lists.  
Address: **BAILEY & HANFORD,**  
MAKANDA, JACKSON CO., ILL.

## Hart Pioneer Nurseries

OF FORT SCOTT, KANSAS.  
A full line of Nursery Stock, Ornamental Trees, Roses and Shrubbery. We have no substitution clause in our orders, and deliver everything as specified. 220 Acres in Nursery Stock.  
Reference: Bank of Fort Scott. Catalogue Free on application.  
Established 1857.

SEND TO THE  
**KANSAS HOME NURSERY**  
For Price List of all  
**FRUIT & ORNAMENTAL TREES**  
OF REAL MERIT  
For the Western Tree-Planter.  
A. H. GRISSA, Lock Box 1247, Lawrence, Kas

## THE LAMAR NURSERIES.

Headquarters for Fine Nursery Stock  
Which is Offered at  
**HARD - TIME PRICES!**

Dealers and Nurserymen supplied at lowest wholesale rates.  
Parties desiring to buy in large or small quantities will save money by purchasing our stock.  
We have Apple, Peach, Pear, Plum, Cherry and Evergreen Trees. Grape Vines in all varieties, and **FOREST TREES** a specialty. Osage Hedge Plants and Russian Mulberry in any quantity.  
Write for Prices.  
C. H. FINK & SON, LAMAR, MO.

## THE TOPEKA : Seed : House

ORCHARD GRASS, BLUE GRASS,  
RED-TOP, All kinds of CLOVER,  
TIMOTHY, MILLET, HUNGARIAN,  
AND OTHER FIELD SEEDS,  
At Wholesale or Retail.

## GARDEN - SEEDS!

We have a stock of fresh Garden Seeds, embracing many new varieties.  
**TWELVE PAPERS**  
Of any named varieties of Garden Seeds (except Peas, Beans and Corn), and two papers of Flower Seeds for 50 cents.  
Send Money Order or Postage Stamps, and write your address plainly.

Address  
**TOPEKA SEED HOUSE,**  
S. H. DOWNS, Manager,  
No. 78 Kansas Avenue, TOPEKA, KAS.

## RUPTURE

RELIEVED AND CURED

Without any operation or detention from business, by my treatment, or money refunded. Send stamp for Circular, and if not as represented will pay railroad fare and hotel expenses both ways to parties coming here for treatment.  
**DR. D. L. SNEDIKER,**  
Emporia, Kas.

## RUPTURE

Have you heard of the astounding reduction for **DR. J. A. SHERMAN'S** Famous Home Treatment, the only known guarantee comfort and cure without operation or hindrance from labor! No steel or iron bands. Perfect retention night and day, no chafing, suited to all ages. Now \$10 only. Send for circular of measurements, instructions and proofs. Get cured at home and be happy, office 294 Broadway, New York.

**HIRE'S IMPROVED ROOT BEER**  
25 CENTS PACKAGE  
Makes Five Gallons of a delicious, sparkling temperance beverage. Strengthens and purifies the blood. Its purity and delicacy commend it to all. Sold by druggists and stores everywhere.

## The Busy Bee.

### Swarming, Etc.

Picking up a bee paper lately I found this statement given by quite a prominent apiarist, regarding swarming: "If we allow bees to swarm they will cast their first swarm on or about the commencement of the honey season: and in about twelve days we may expect the second swarm; and in four days more the third. I think this is the average time of swarming; therefore it is sixteen days from the time the old queen leaves the hive with the first swarm until the third swarm issues." Having allowed natural swarming in my apiary during all of my eighteen years of bee-keeping, and believing that the above is not correct, also knowing that much of the interest of bee-keeping hovers about the natural swarming of bees, I thought I could please the readers of *Gleanings* no better at this time, just as swarming is about to commence in the Middle and Northern States, than to tell some facts as I find them, relative to when swarms may be expected.

To the beginner this is a matter of much importance; for by them, hours and days are spent needlessly in watching bees, which a little knowledge of the matter would save, as well as to do away with much anxiety in the matter. As to when the first swarm of the season will issue, be the apiary large or small, I have never known it to fail that such a one came with the sealing of the first queen cell, this being the rule with all swarms; but after swarming gets under headway in a large apiary, especially with the Italian bees, some swarms issue without any preparation for swarming at all; others, when eggs are laid in queen cells, etc.; but I never knew such a case with the first swarm of the season. Understand, I do not say that a first swarm of the season never did issue without this preparation, but only that I never knew one to do so. Then we have the sealing of the cell as the indication of a first swarm. Now, all persons familiar with queen-rearing know that the time the queen remains sealed in the cell does not vary much from seven days; hence in seven days after the old queen leaves with the first swarm, the first young queen is hatched. If a second swarm is to issue, this queen begins to peep or pipe when from six to eight hours old. If she commences to peep I never knew a swarm to fail to issue, unless the object of the bees was thwarted by the keeper or exceptionally bad weather. This piping is kept up for from thirty-six to forty-five hours, when, unless kept back by foul weather, the second swarm issues.

An item worthy of note is, that the weather must be very bad to keep after-swarms from issuing, for they often issue on cloudy days, or on the least streak of sunshine in a rainy day. Then, again, they come out at all hours of the day, from 5 in the morning till 7 at night, while the time of issuing of first swarms is usually between 9 a. m. and 4 p. m. Then, as a rule, all second swarms may be expected in nine days after the issue of the first swarm, instead of twelve, as our friend quoted tells us. If the bees conclude to swarm still further, after the second swarm has issued, another queen is allowed her liberty while the rest are kept confined in their cells, being fed through holes in the cell, so they are virtually of the same age and strength as the one which has her liberty. The queen let loose at once begins peeping, keeping it up for about the same length of time the others did, so that the third swarm comes two days after the second, or eleven days after the first. If a fourth, fifth, or

sixth swarm issues they come out the next day after the third, and each other, so that, should the sixth swarm issue it would come on the fourteenth day after the first. Five swarms is the highest number I ever knew cast from one colony during one swarming period; but I believe as high as six have been reported.

As I believe all after-swarms are a disadvantage, I wish to tell the reader, before closing, what I consider the simplest way of stopping them when the first swarm is hived on a separate stand, instead of on the Heddon plan. If the first swarm issued according to rule, the first young queen will be hatched in seven days, and, unless prevented, lead out a second swarm on the ninth day. Taking advantage of this fact I wait eight days after the issue of the first, when the hive is opened and all the queen cells are cut off, when we have a sure thing in the matter, which can not be said regarding any other plan dependent upon the cutting of queen cells. Where a person has not too many hives I find it as good a way as any to listen for peeping in the evening after it is thought a young queen has hatched; and if the queen is heard you are certain of her presence among the bees. If not heard, then listen the next evening, and so on till she is heard, when you know you are safe in cutting all cells. In cutting these cells it is well to shake the bees off the combs or else you may fail to see all of them, in which case, if one remains a swarm is sure to issue.

This article is written mainly for beginners, for all of the older heads have established plans of one kind or another, which—ahem!—are probably any of them better than the above. If so, won't they tell us about them.—G. M. Doolittle, in *Gleanings*.

### A Woman's Age.

A woman, it is said, is no older than she looks. Many women, however, look double their actual age by reason of those functional disorders which wear upon the nerves and vitality, and which, if unchecked, are liable to change the most robust woman to a weak, broken-down invalid. Dr. Pierce's "Favorite Prescription" will positively cure every irregularity and weakness peculiar to the sex, and requires but a single trial to prove its surpassing merit. Price reduced to one dollar. By druggists.

## THE MARKETS.

By Telegraph, June 6, 1887.

### LIVE STOCK MARKETS.

#### St. Louis.

CATTLE—Receipts 2,000, shipments 600. Market active and strong. Choice heavy natives 3 40a4 60, fair to good shipping steers 4 00 a4 40, fair to choice butchers 3 70a3 80, fair to good feeders 3 10a4 00, fair to good stockers 2 10 a3 10, common grass to corn-fed Texas 2 00a 4 20.

HOGS—Receipts 3,900, shipments 800. Market active and a shade higher. Choice heavy and butchers selections 4 90a5 00, fair to good packing 4 70a4 90, medium to prime Yorkers 4 55a4 70, common to good pigs 3 75a4 50.

SHEEP—Receipts 500, shipments.... Market firmer and higher. Fair to choice clipped 3 20a4 20, lambs 3 70a4 70.

#### Chicago.

The Drovers' Journal reports:

CATTLE—Receipts 8,200, shipments 2,600. Market steady. Shipping steers, 950 to 1,500 lbs., 3 90a4 40; stockers and feeders 2 50a3 60; cows, bulls and mixed, 2 60a3 50; Texas cattle, 2 90a4 15.

HOGS—Receipts 22,000, shipments 5,000. Market strong. Rough and mixed 4 65a5 00, packing and shipping 4 90a5 20, light 4 50a4 90, skips 3 00a4 50.

SHEEP—Receipts 3,000. Market stronger. Natives 3 00a4 00, Western 2 75a4 00, Texans 2 50 a3 65, lambs 1 50a3 50 per head.

#### Kansas City.

Received from 5 p. m. Saturday to 12 m. today, 1,452 cattle, 5,114 hogs and 852 sheep. Held over, 269 cattle, 2,685 hogs and no sheep. Total, 1,723 cattle, 7,799 hogs and 852 sheep.

CATTLE—Shipping and butchers steers 3 60 a4 37½.

HOGS—Tippy hogs were not plenty, and the best sold at 4 70a4 72½. Some 380-lb. hogs, fat

but rather coarse, and too heavy for the packers, sold at 4 70 to ship. Bulk of sales was at 4 50a4 65.

SHEEP—The receipts were fair, but the quality was not generally good. Some choice 110-lb. sheep sold at 3 75—25c lower than one week ago, but the common grades were weak at last week's decline. A good many mixed stockers and slight muttons sold at 2 25a3 50.

### PRODUCE MARKETS.

#### New York.

WHEAT—No. 2 red, 98½a98¼c elevator, 99¾a 99½c delivered.

CORN—No. 2, 47¾a48c elevator, 47½c delivered.

#### St. Louis.

WHEAT—No. 2 red, cash, 80½c; June, 80½c.

CORN—Cash, 37a37½c bid.

OATS—Cash, 27¾a28c.

RYE—Offered at 56c; dull.

#### Kansas City.

WHEAT—Receipts at regular elevators since last report... bus., withdrawals 1,696 bus., leaving stock in store as reported to the Board of Trade to-day 123,531 bus. The market to-day on 'change was very quiet, with no sales on the call of any of the different grades, either for cash or future delivery. No. 2 soft winter, cash, no bids nor offerings; June, 78c bid, 79c asked. No. 2 red winter, cash and June, 72½c bid, 72½c asked.

CORN—Receipts at regular elevators since last report 17,446 bus., and withdrawals 7,922 bus., leaving stock in store as reported to the Board of Trade to-day 213,682 bus. The market to-day on 'change was stronger. No. 2 cash sold at 31¼c, against 31½c bid Saturday, when 31½c was asked. On track by sample: No. 2 cash, 32½c; No. 2 white, cash, 36c.

OATS—No. 2 cash, no bids nor offerings. On track by sample: No. 2 mixed, cash, 30c.

RYE—No bids nor offerings.

HAY—Receipts 6 cars. Market steady.

Fancy, small baled, 10 00; large baled, 9 50; wire-bound 50c less. Low grades dull and weak.

OIL-CAKE—Per 100 lbs. soaked, 1 25; 2100 per ton, free on board cars; car lots, 20 00 per ten.

SEEDS—We quote: Flaxseed, 85c per bushel on a basis of pure. Castor beans, 1 25 for prime.

BUTTER—Receipts large and market firm for poor and off stock going to shippers at 8c. We quote: Creamery, fancy, 18c; good, 14c; fine dairy in single package lots, 12½c; store-packed do., 10c for choice.

CHEESE—We quote: Full cream 10c, part skim flats 6a7c, Young America 12½c, Kansas, choice, 10c.

EGGS—Receipts small and market firm at 13c per dozen for fresh.

POTATOES—Minnesota, 1 00; choice Michigan, 1 10.

BROOMCORN—We quote: Green self-working, 2½a3c; green hurl, 3¼c; green inside and covers, 2c; red-tipped and common self-working, 1½a1¾c; crooked, 1c.

PROVISIONS—Following quotations are for round lots. Job lots usually ¼c higher. Sugar-cured meats (canned or plain): Hams 11c, breakfast bacon 9¼c, dried beef 12c. Dry salt meats: clear rib sides 7 50, long clear sides 7 40, shoulders 5 50, short clear sides 7 70. Smoked meats: clear rib sides 8 20, long clear sides 7 90, shoulders 6 50, short clear sides 8 20. Barrel meats: mess pork 15 00. Choice tierce lard 6 00.

### Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought.  
T. E. BOWMAN & Co.,  
Bank of Topeka Building, (upper floor.)  
Topeka, Kas.

## WOOL HAGEY & WILHELM, Commission Merchants, 220 N. Commercial St., ST. LOUIS, MO.

REFERENCES:—Boatmen's Bank, St. Louis; Dunn's Mercantile Reporter, St. Louis; KANSAS FARMER Co., Topeka, Kas.; First National Bank, Beloit, Kas.

## Kansas City Stock Yards, KANSAS CITY, MISSOURI,

Are by far the most commodious and best appointed in the Missouri Valley, with ample capacity for feeding, weighing and shipping cattle, hogs, sheep, horses and mules. No yards are better watered and in none is there a better system of drainage.

### Higher Prices are Realized

Here than in the markets East. All the roads running into Kansas City have direct connection with the Yards, which thus afford the best accommodations for stock coming from the great grazing grounds of Texas, Colorado, New Mexico and Kansas, and also for stock destined for Eastern markets.

The business of the Yards is done systematically, and with the utmost promptness, so that there is no delay and no clashing, and stockmen have found here, and will continue to find that they get all their stock is worth, with the least possible delay.

## Kansas City Stock Yards Company Horse and Mule Market.

FRANK E. SHORT.

CAPT. W. S. TOUGH.

### F. E. SHORT & CO. Managers.

This company has established in connection with the Yards an extensive Horse and Mule Market, known as the KANSAS CITY STOCK YARDS COMPANY HORSE AND MULE MARKET. Have always on hand a large stock of all grades of Horses and Mules, which are bought and sold on commission, by the head or in carload lots.

In connection with the Sales Market are large feed stables and pens, where all stock will receive the best of care.

Special attention given to receiving and forwarding. The facilities for handling this kind of stock are unsurpassed at any stable in this country. Consignments are solicited, with the guarantee that prompt settlements will be made when stock is sold.

C. F. MORSE,  
General Manager

E. E. RICHARDSON,  
Secretary and Treasurer.

H. P. CHILD,  
Superintendent.

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## James H. Campbell & Co., LIVE STOCK COMMISSION MERCHANTS.

FOR THE SALE OF—CATTLE, HOGS AND SHEEP.

Rooms 23 and 24, Exchange Building, Kansas City Stock Yards.

Unequaled facilities for handling consignments of Stock in either of the above cities. Correspondence invited. Market reports furnished free. Refers to Publishers KANSAS FARMER.

## GARDEN CITY!

The QUEEN CITY of the Arkansas Valley.

Surrounded by the FINEST LANDS in Kansas. Lands cheap, but developing rapidly. Now is the time to invest! Deeded Lands, \$4 to \$7 per acre.

Write for full information to B. F. STOCKS & CO., The leading Real Estate Firm in GARDEN CITY, KANSAS.

THE STRAY LIST.

HOW TO POST A STRAY.  
THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1866, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice.

Broken animals can be taken up at any time in the year.

Unbroken animals can only be taken up between the first day of November and the first day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray.

If an animal liable to be taken up, shall come upon the premises of any person, and he falls for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

Any person taking up a stray, must immediately advertise the same by posting three written notices in as many places in the township giving a correct description of such stray.

If such stray is not proven up at the expiration of ten days, the taker-up shall go before any Justice of the Peace of the township, and file an affidavit stating that such stray was taken up on his premises, that he did not drive nor cause it to be driven there, that he has advertised it for ten days, that the marks and brands have not been altered; also he shall give a full description of the same and its cash value. He shall also give a bond to the State of double the value of such stray.

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting), make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than ten dollars, it shall be advertised in the KANSAS FARMER in three successive numbers.

The owner of any stray may, within twelve months from the time of taking up, prove the same by evidence before any Justice of the Peace of the county, having first notified the taker-up of the time when, and the Justice before whom proof will be offered. The stray shall be delivered to the owner, on the order of the Justice, and upon the payment of all charges and costs.

If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker-up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker-up; said appraisers, or two of them, shall in all respects describe and truly value said stray, and make a sworn return of the same to the Justice.

They shall also determine the cost of keeping, and the benefits the taker-up may have had, and report the same on their appraisal.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray.

Any person who shall sell or dispose of a stray, or take the same out of the State before the title shall have vested in him, shall be guilty of a misdemeanor and shall forfeit double the value of such stray and be subject to a fine of twenty dollars.

FOR WEEK ENDING MAY 26, 1887

Comanche county—Chas. P. Overman, clerk.  
MARE—Taken up by A. D. Lee, in Coldwater tp., (P. O. Coldwater), April 26, 1887, one sorrel mare, roach mane, branded L on left shoulder; valued at \$30.

Nemaha county—R. S. Robbins, clerk.  
HEIFER—Taken up by Nicholas Helnegar, in Washington tp., March 24, 1887, one red heifer, 2 years old, silt in left ear; valued at \$15.

Pawnee county—Jas. F. Whitney, clerk.  
BULL—Taken up by Omer N. Hittle, in Garfield tp., (P. O. Garfield), May 3, 1887, one red and white bull, 2 years old, crop off right ear above and below; valued at \$15.

Butler county—James Fisher, clerk.  
PONY—Taken up by J. B. Templeton, in Sycamore tp., May 6, 1887, one black mare pony, 3 years old, scar on left shoulder, some harness marks.

Wichita county—W. R. Groff, clerk.  
MARE—Taken up by William H. Vetter, one brown mare, supposed to be 10 years old, weight about 1,100 pounds, white forehead, white stripe across the nose and white on left hind foot, no brands; valued at \$100.

Cherokee county—L. R. McNutt, clerk.  
MARE—Taken up by G. C. Wallace, in Garden tp., (posted May 20, 1887), one chestnut sorrel mare, about 14 hands high, about 8 years old, blaze face, left hind foot white, branded J. S. on left shoulder and 31 on left side of neck, scars on outside of both hind legs.

Rush county—L. K. Hain, clerk.  
MARE—Taken up by James E. Rowland, in Brookdale tp., (West Point P. O.), one dark bay mare, 9 years old, black mane and tail, white blaze in face, 15 hands high, branded C. R. Y. on left thigh and F. D. F. on left shoulder; valued at \$25.

FOR WEEK ENDING JUNE 2, 1887.

Barber county—Robt. J. Tahoferro, clerk.  
PONY—Taken up by W. P. Anglin, in Hazelton tp., (P. O. Hazelton), April 7, 1887, one light dun and white horse pony, 14 hands high, split in left ear, M and 3 on left shoulder; valued at \$16.

Rice county—Wm. Lowrey, clerk.  
PONY—Taken up by James A. Underwood, in Eureka tp., (P. O. Alliance), May 2, 1887, one gray mare pony, 14 hands high, branded Y with diamond in fork of the letter on left hip and R on left jaw; valued at \$30.

Comanche county—Thos. P. Overman, clerk.  
HORSE—Taken up by Edward Keho, in Nescatunga tp., (P. O. Nescatunga), April 25, 1887, one gray horse; valued at \$15.

HORSE—By same, one bay horse; valued at \$10.  
HORSE—By same, one sorrel horse; valued at \$15.

Hamilton county—J. M. Hicks, clerk.  
MARE—Taken up by J. W. Phillips, in Coolidge tp., (P. O. Coolidge), April 18, 1887, one light roan mare, 3 years old, over-bit in right ear; valued at \$35.

MARE—By same, one dark roan mare, 2 years old, over-bit in right ear; valued at \$35.

Leavenworth county—J. W. Niehaus, clerk.  
HORSE—Taken up by C. F. Huddleston, in Alexan-

dria tp., April 30, 1887, one dark brown horse, about 15½ hands high, scars on left hip, about 15 years old; valued at \$30.

MARE—By same, one brown mare, about 15 hands high, white hind feet, about 12 years old; valued at \$30.

MARE—By same, one sorrel mare, about 14½ hands high, blaze face, three white feet, branded S on left shoulder, about 10 years old; valued at \$20.

Allen county—R. W. Duffy, clerk.  
COW—Taken up by J. A. Smith, in Eismore tp., May 10, 1887, one brindle cow, end of horns sawed off, crop off right ear; valued at \$14.

Brown county—G. I. Prewitt, clerk.  
BROOD SOW—Taken up by Joseph Stager, in Mission tp., May 14, 1887, one large brood sow, weight about 300 pounds, ring in nose.

Johnson county—Henry V. Chase, clerk.  
HORSE—Taken up by Henry E. Peachey, near Shawnee, one white horse, black ears, right eye out, saddle marks, had on bridle with curb-bit, about 12 years old, 14½ hands high.

FOR WEEK ENDING JUNE 9, 1887.

Sedgwick county—E. P. Ford, clerk.  
PONY—Taken up by George White, in Minneha tp., May 11, 1887, one dark mare pony, 15 years old, collar marks; valued at \$15.

Scott county—Geo. Fox, clerk.  
COW—Taken up by Geo. E. Rees, in Scott tp., May 30, 1887, one red cow, 4 years old, has some white in forehead and under belly, has a wart on left front test; valued at \$30.

Johnson county—Henry V. Chase, clerk.  
HORSE—Taken up by R. V. Williams, in Oxford tp., one horse, 9 years old, both hind feet white, strip on nose, branded W on left shoulder, 16 hands high; valued at \$60.

HORSE—By same, one flea-bitten gray horse, 12 years old, 15½ hands high; valued at \$50.

STOLEN!

PARSONS, KAS., April 18, 1887.  
Stolen last night, from Parsons, one Bright Bay Horse, 6 years old past, 15½ hands high, weighs about 1,000 pounds, is in splendid condition, roached mane, heavy tail, had been burnt on both legs by a rope under fetlocks, one leg being marked plainer than other; has clean head and prominent eyes, and is a horse that will attract attention anywhere. \$50 Reward for the recovery of the horse, and \$100 for the arrest and conviction of the thief.  
Address M. B. MASON, Dep'ty Sheriff, Parsons, Kas.

W. H. REED & SON,  
Wholesale and Retail Dealers in

FURNITURE  
156 KANSAS AVE.,  
(Between Fifth and Sixth.)  
TOPEKA, :: KANSAS.

One of the Largest and Best-Selected Stocks in the State, and Prices Guaranteed to be as Low as the Lowest.

We make a specialty of all orders for shipment. Goods packed and shipped without extra charge at lowest freight rates.

OTTAWA HERD  
OF PURE-BRED  
Poland-China & Durcc Jersey Swine  
I. L. WHIPPLE, Prop'r,  
Ottawa, Kansas.

NATIONAL HERD.  
Established 1845. THOROUGH BRED POLAND CHINAS as produced by A. C. Moore & Sons, Canton, Ill.  
We breed from 160 sows and 12 males. All recorded in A. P. C. Record. Pigs all eligible to record. Pedigree sent when desired.  
Swine Journal 25 Cents in 1 & 2-ct. stamps.  
Photo Card of 48 breeders sent free.  
COME AND SEE OUR STOCK. We have special rates by express. If not as represented we will pay your expenses.

Devon Cattle!  
We are the largest breeders of this hardy, easy-keeping breed, one of the best for the West. Stock for sale singly or car lots.  
RUMSEY BROS. & CO.,  
EMPORIA, KANSAS.

TIMBER LINE HERD  
Holstein - Friesian Cattle.  
We have for sale any or all of our entire herd of Holstein-Friesian Cattle, consisting of Cows, Heifers and Calves—full-bloods, and Grades up to fifteen-sixteenths. Ask for just what you want. Send for prices of family cows—grades. All our Holsteins will be at Winfield, Kas., after April 1, 1887.  
W. J. ESTES & SONS.

TOPEKA  
Hereford Cattle Co.,  
TOPEKA, :: KAS.

ONE HUNDRED HEAD OF COWS AND HEIFERS FOR SALE. LIBERAL PRICES. TERMS TO SUIT PURCHASERS. Twenty head coming two-year-old Bulls on sale at Topeka Stock Yards.

New Catalogues free on application. Address  
F. P. CRANE, Manager.  
C. E. CURRAN, Secretary.  
G. A. FOWLER, ST. MARYS, KAS. E. S. SHOCKEY, MANAGER, LAWRENCE, KAS.

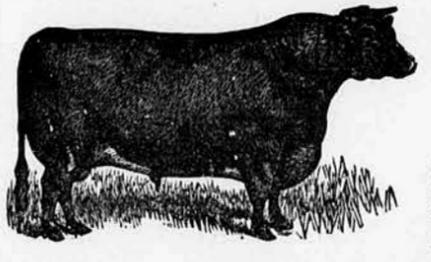
EARLY DAWN HEREFORD HERD,  
The Champion Herd of the West,  
—CONSISTING OF—  
200 HEAD OF THOROUGH BRED HEREFORD CATTLE,  
Including the IMPORTED FOWLER HERD and the FAMOUS SHOCKEY & GIBB HERD 1,200 head High-grade Hereford and Short-horn Cattle.  
We want 1,000 calves annually, sired by bulls purchased of us. Inspect our herd and learn particulars. Address  
E. S. SHOCKEY, Manager, Lawrence, Kansas.

PUBLIC SALE OF PURE-BRED HEREFORDS!



—AT—  
LINCOLN, NEBRASKA,  
WEDNESDAY, JUNE 23, 1887,  
Comprising 17 Females and 13 Bulls, from the Sweepstakes Prize Herd of J. S. HAWES, Colony, Kansas.  
FORTUNE, GROVE AND WILTON FAMILIES, THE BEST OF THE BREED.  
Sale to be held at the Chickering Barn, at 1:30 p. m., sharp. For Catalogues, apply to  
J. S. HAWES,  
COLONY, KANSAS.  
F. M. WOODS, Auctioneer.]

Public Sale of  
SHORT-HORN CATTLE!

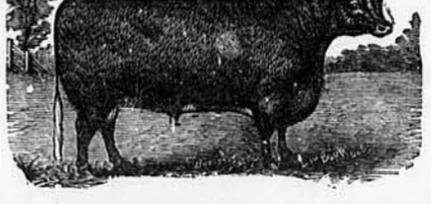


—AT—  
SABETHA, KANSAS,  
—ON—  
Tuesday, June 21, 1887,  
(1 o'clock, sharp.)

I will offer for sale a draft of 40 HEAD from Oakland Stock Farm Herd, Sabetha, Nemaha county, Kansas. 10 Bulls and 30 Females, mostly young and a desirable lot to select from for the foundation of a herd, or to add new blood to your herd. Several fine show heifers are included in the sale. This herd is so well and favorably known that it needs no further notice, than to call your attention to the time and place of sale. The premiums they have taken at State and District fairs in the West, and at the World's Exposition, New Orleans, are sufficient to show that they are a class of desirable cattle. Mazurka Duke and the late imported young bull Lord Haddo, directly from Scotland, now head the Oakland Stock Farm Herd. Most of the cows and heifers old enough, will be in calf by one of these noted bulls.  
For further information and for Catalogue, apply to  
COL. S. A. SAWYER, Auctioneer.  
W. S. WHITE, Sabetha, Kansas.

JOINT PUBLIC SALE!

Well-Bred Short-horns and High-Grade Cattle,



—ON—  
THURSDAY, JUNE 23, 1887,  
We will offer for sale, one mile west of  
CLEMENTS, Chase Co., KANSAS,

49 HEAD OF COWS AND HEIFERS, all registered or eligible to record, consisting of the well-known families of Young Marys, Floras, Duchess of Goodness, Adelaides and other standard families. Females mostly in calf, or calf at foot. 4 BULLS, from 9 to 13 months old. This is no culling-out sale, but the entire herd, without reserve, will be sold. We will also offer about 70 HEAD OF HIGH-GRADE COWS, HEIFERS AND STEERS. All cordially invited.  
CLEMENTS—is located on the A., T. & S. F. R. R., thirty miles west of Emporia. Free transportation to and from trains.  
TERMS:—Six months time on bankable paper at 10 per cent. interest.  
Sale to commence at 10 o'clock a. m. Catalogues ready June 10th.  
W. C. BANOROFT, Cedar Point, Kas.  
A. R. ICE, Clements, Kas.  
COL. S. A. SAWYER, Auctioneer.

Cheap Homes!

MEADE COUNTY, KANSAS. Organized; county seat permanently located at Meade Center; building stone. Three Railroads coming at the rate of two miles a day. Land cheap, but rapidly advancing. MEADE IS THE BANNER COUNTY OF THE SOUTHWEST, having won a special prize this year for county exhibit at the Southwestern Exposition, fifteen counties competing, and another at Dodge City Exposition over all competitors. Now is the time to invest. For further information address J. A. LYNN, Land and Loan Agent, Meade Center, Kansas. All representations guaranteed.

**The Veterinarian.**

[The paragraphs in this department are gathered from our exchanges.—ED. FARMER.]

**SCOURS IN PIGS.**—I have a nice lot of shoats of last winter's raising. I fed them slops a little warm till the weather became warm, when I gave it to them cold. Some of the shoats have the scours. I attribute it to the change in their food, as I think their bowels became chilled. Please give me a remedy. [A sudden change from warm to cold feed or from raw to cooked, always produces some irregularity of the bowels. It may be, however, that in your case it came in a large measure from overfeeding, as it very often arises in that way. Overcrowding the stomach produces indigestion and an acrid acid that brings on scours. First, it is necessary to feed very light with such foods as oats and bran, and prepare the following mixture: Two pailfuls of hard wood ashes and one of air-slacked lime, to which add 5 pounds of Spanish Brown, 1 pound bicarbonate of soda, ½ pound capsicum and a few pounds of common salt. Put about a teacupful in a bushel of feed. Or the following can be given beneficially: One ounce prepared chalk, ½ ounce powdered catchu, 2 drachms powdered ginger, ½ ounce powdered opium, ½ pint peppermint water. About a teaspoonful to a dose for hogs.]

**FISTULOUS WITHERS.**—I have a mare that has a distula on her withers which has been discharging for two months or more. Do you think it can be treated successfully? If so, please state how. [Subjects affected with fistulous withers can, as a rule, be treated successfully, providing such cases receive the scientific and surgical treatment which they require. The majority of those cases, however, call for special treatment, which no one but an expert is capable of attending to. The first and most important part of the task is to make a proper diagnosis; this done, the subsequent treatment is easily determined. In many of those cases of long standing the cartilaginous extremities of the dorsal vertebrae (bones of the back) are found to be in a state of caries, and all such cases invariably require prompt surgical aid—in fact, all of the diseased parts must be removed with a bone forceps before any hope can be entertained of effecting a radical cure. In some cases of fistulous withers the soft parts only are involved, and the treatment of such cases requires more care and attention than any great amount of skill. In the treatment of those cases where sinuses are found running up and down in various directions, it will be prudent to make counter openings, so as to give free exit to the pus. The counter openings should be made as low down as possible, and is best done with a seton needle. An excellent injection may be made of carbolic acid, 1 drachm; tincture of muriate of iron, 1 ounce; water, 1 pint.]

**BLOATING IN CATTLE.**—Clover constitutes about three-fourths and grass one-fourth of my pasture at present. I wish to know if it is clover-bloat that ails my cattle, and if so, the cause, the means of prevention, and the best remedy. Is tapping an animal a good remedy? if so, how should it be done? The clover in my pasture is not very rank, has no blooms, but by continual feeding on it cattle can get an overload of it. [The cause of bloating is evidently the clover pasture; and to prevent the bloating, the cattle should not have access to such pasture when the herbage is wet from rain or dew. In cases of bloating, give every half hour half an ounce of aqua ammonia in a

pint of cold water. When bloating has lasted over twelve hours, a different kind of gas is generated, and a different remedy is then required, such as two drachms of chloride of lime, dissolved in a pint of cold water, and given every hour. After a severe attack of bloating, always give a laxative dose of salts. In urgent cases, when medicine cannot be soon had, plunge the trocar into the left flank in a direction inward, downward and forward, inserting it midway between the last rib and the haunch bone, and eight inches from the bones of the loin. When away out in the fields, and no trocar is obtainable, a long-bladed penknife may be used, putting it in to the handle, and holding it in its position so long as gas escapes. But the knife is not a safe instrument, as particles of food are apt to pass into the abdominal cavity and cause fatal inflammation.]

The scab on apples is a miniature forest of the plants of the fungus family.

English Spavin Liniment removes all hard, soft, or calloused lumps and blemishes from horses, blood spavin, curbs, splints, sweeny stifles, sprains, sore and swollen throat, coughs etc. Save \$50 by use of one bottle. Every bottle warranted by Swift & Holliday, drug gists, Topeka, Kas.

Eleven Importations Within the Last Twelve Months. We have now on hand the grandest collection of

**CLYDESDALE**

—AND—

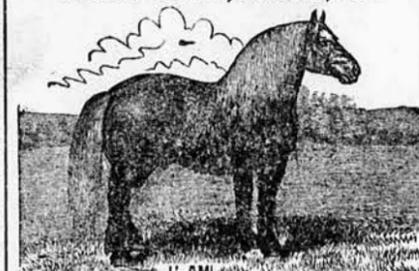
**ENGLISH SHIRE HORSES**



in America, and are the only firm that ever imported a CHAMPION WINNER AT THE GREAT LONDON DRAFT HORSE SHOW. Prices moderate and terms to suit buyers. Send for new illustrated catalogue to

**GALBRAITH BROS., Janesville, Wis.**

**RIVERSIDE STOCK FARM, DEGEN BROS., Ottawa, Ill.**



Importers and Breeders of French Draft and French Coach Horses. We have now over 75 head of imported French Draft Stallions and Mares on hand. Our importations this year have been selected from the best breeding district in France. Our stock is all recorded in France and in the National Register of French Draft Horses in America. Our French Coach Horses are the best that could be found in France. We will be pleased to show our Stock to visitors. Correspondence invited and promptly answered. **DEGEN BROS.**

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IMPORTERS AND BREEDERS OF **Percheron, Clydesdale and Coach Horses.**

106 Head of Stallions just arrived from Europe. Choice stock for sale on easy terms. We won all the leading prizes at Kansas State Fair last fall. Send for Illustrated Catalogue, free on application.

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In connection with G. M. SEXTON, Auctioneer to the Shire Horse Society of England, Importers and Breeders of

**ENGLISH SHIRE & SUFFOLK PUNCH HORSES RED POLLED CATTLE and LARGE YORKSHIRE PIGS,**



Monitor (3232).

Have on hand a very choice collection, including a recent importation of Horses, several of which have won many premiums in England, a special guarantee of their soundness and superiority of form and action. Prices very moderate and terms easy. Send for New Catalogue. Address **34 East Fifth street, TOPEKA, KANSAS.**

PURE POLAND-CHINAS.

LARGE ENGLISH BERKSHIRES.

**Rome Park Stock Farm.**

T. A. HUBBARD, PROP'R, WELLINGTON, KANSAS.

**SWEETSTAKES ON HERD, BREEDERS' RING, BOAR AND SOW, WHEREVER shown in 1886, except on Boar at Winfield, winning (75) premiums at four fairs, including Grand Silver Medal for Best Herd, at Topeka, Kas.**

Stock recorded in Ohio Poland-China and American Berkshire Records. In addition to my own breeding, the animals of this herd are now and have been

**PRIZE - WINNERS,**

selected from the notable and reliable herds of the United States, without regard to price. The best and largest herd in the State. I will furnish first-class Hogs or Pigs with individual merit and a gilt-edged pedigree. Single rates by express.

PERSONAL INSPECTION SOLICITED. CORRESPONDENCE INVITED.

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Clydesdale & Norman HORSES.

I have a choice collection of imported Pure-bred and Registered Clydesdales at low prices.

Each Stallion guaranteed a breeder. Correspondence solicited.

Prince of the Times #59.

**WOOD DALE BERKSHIRES!**

I have now ready for immediate shipment as fine a lot of Early Spring Pigs as I ever had at one time, a good share of which are the produce of prize-winning sows and boars at the largest shows of America and England. Also a few Young Sows in Pig for sale. My herd won at World's Fair, New Orleans, La., the \$250 gold medal for best boar and five sows of any breed, and also the \$100 gold medal for heaviest hog of any breed. I think I am not exaggerating when I state that my herd is the acknowledged

Headquarters of America for Berkshires of the Largest Size and Best Quality.

My new Catalogue, just from the press, containing the pedigrees in full of all my breeding animals, together with a complete list of all prizes won to date, will be sent free to all who write for it. Prices also given upon application, and guaranteed the same to all.

I solicit from all an examination of my stock and will meet all visitors at the train.

Address

**N. H. GENTRY, Sedalia, Mo.**



Send stamp for Circular and Price List.

**CHOICE**

**Berkshire and Small Yorkshire**

PIGS and MAMMOTH BRONZE TURKEYS. We have a splendid lot of the above named hogs and turkeys for sale at head time prices. Write for prices before making purchases if you need anything in this line. Satisfaction guaranteed. **WM. BOOTH & SON, Winchester, Kas.**

**SELECT HERD OF LARGE BERKSHIRES!**

G. W. BERRY, PROP'R, TOPEKA, KAS.

My breeders have been selected, regardless of expense, from the leading herds of the United States; are bred from the best stock ever imported, and represent seven different families. Healthy pigs from prize-winning stock for sale. Write for circular and prices or come and see. [Mention this paper.]

**PLEASANT VALLEY HERD**

**Pure-bred Berkshire Swine.**



I have thirty breeding sows, all matured animals and of the very best strains of blood. I am using three splendid imported boars, headed by the splendid prize-winner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for pigs of either sex not akin, or for matured animals. Prices reasonable. Satisfaction guaranteed. Send for catalogue and price list, free. **S. McCULLOUGH, Ottawa, Kansas.**

**ENGLISH BERKSHIRES.**



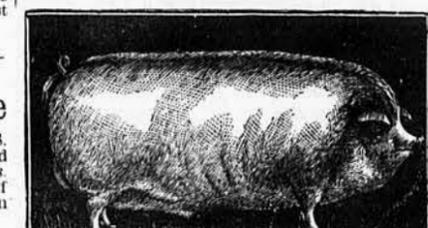
THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE #880, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chickens. Your patronage solicited. Write. [Mention this paper.] **M. B. KEAGY, Wellington, Kas.**

**THE GOLDEN BELT HERD OF THOROUGHbred POLAND-CHINAS.**



Choice animals of all ages generally on hand at prices to suit the times. Orders for extra show Spring Pigs should be sent in at once. A few choice Sows with pig, for sale. Breeders recorded in A. P.-C. Record. Pedigree with every sale. Safe arrival and satisfaction guaranteed. Low rates by express. **F. W. TRUEDELL, Lyons, Kas.**

**FOX RIVER VALLEY HERD OF IMPROVED CHESTER HOGS.**



CHESTER COUNTY BOY #109, N.C.W.B. 1st PRIZE UNDER 6 MO. AT PA. STATE FAIR, 1886.

I have a few prize-winning boars for sale, also forty-five head of aged sows have farrowed this spring. Orders booked for pigs without money till ready to ship. Nothing but strictly first-class pigs shipped. Prices reasonable and satisfaction guaranteed. My motto: "Individual superiority and best of pedigrees." I am personally in charge of the herd. **T. B. EVANS, Geneva, Ill.**

To properly keep straw and hay in stacks, the stacks must be so constructed as to shed water.

Making the plum orchard a poultry run will greatly diminish the number of insects which prey upon the trees.

Poultry should have a certain proportion of salt in their food, as it is necessary to the promotion of health and thrift.

Oats are the best grains for calves in their first winter, and they have best effect when well moistened before feeding.

Young or middle-aged men, suffering from nervous debility or kindred affections, should address with 10 cents in stamps for large treatise, World's Dispensary Medical Association, 663 Main street, Buffalo, N. Y.

W. C. Barry does not believe in planting largely or exclusively to one variety of fruit. Markets change, he says, and varieties now productive and profitable may cease to be so, and the orchard become the most useless tract of land on the farm.

At the New York Experiment Station, the best crop of potatoes, grown under various methods of cutting the seed, etc., resulted from the use of seed selected from the best hills, either planted whole or cut in large pieces, the cuttings permitted to dry three days.

Alfalfa is proving a great blessing to the cattle-growers of California. With it and a supply of water vast tracts of sandy waste, once thought valueless, have become a source of large profit to their owners. The flesh of alfalfa-fed cattle is said to be of superior quality.

Blue grass has the advantage of not running out as long as it receives a top-dressing of manure annually. It does best on limestone soils, but is grown in nearly all sections. Orchard grass is a variety that gives early pasturage, and can be grown where many other grasses will not flourish.

Bloat in calves is really an acute attack of indigestion, which often proves fatal almost immediately. Taken in time it may be relieved by a teaspoonful each of baking soda and ground ginger dissolved in a quarter pint of boiling water and poured down the calf's throat. To do this a long-necked bottle may be used. Rub the stomach briskly, and make the calf move about, if possible, to get rid of the wind.

Consumption Cured.

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

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MUDGE PATENT APPARATUS received from the Bismarck Fair Committee this award: "That it possesses great merit in simple and permanent preservation of fruits and vegetables." It gives woman an independence for her work, as with this apparatus she cans thirty-two quarts per hour, and all the fine flavors of the fruits, are retained as if fresh-gathered from the garden. Cooking perfect, with great saving of labor. Costs only \$10. Will pay its first cost in one day's work. Agents wanted in every county. County rights for sale. Special inducements given to any one who will secure fifty customers in one county. For terms, etc., address CHAS. F. MUDGE, Eskridge, Kansas.



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The Best and Cheapest Automatic Watering Trough Ever Presented to the Public. No patent ever issued has taken so favorably with the stockmen. Endorsed by PROF. SHELTON, of the Kansas State Agricultural College, Manhattan; JOHN WHITE, Live Stock Sanitary Commissioner, and hundreds of other prominent live stock breeders. Now is the Time to Secure Territory, as the Troughs sell on sight, and when once introduced become a necessity to all parties raising stock. Troughs sent on trial to responsible parties giving references. For price of territory, terms and information, address GOODWIN & BISHOP, DELPHOS, KANSAS.

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SEARLES BROTHERS GENERAL AGENTS, No. 621 Commercial St., ATCHISON, KAS. Warranted not to blow down off the tower, and that our Geared Windmills have double the power of any other mill in existence. Mrs. of Tanks and Windmill supplies of every description. and the Celebrated Challenge Feed Grinders, Horse Powers, Corn Shellers, Pumps and Brass Cylinders. Send for Catalogues and Prices. GOOD AGENTS WANTED. Always Buy the Best Geared or Pumping Mills on 30 days' test trial. Challenge Wind Mill & Feed Mill Co., Batavia, Kane Co., Ill.

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\$15 Buys a Rake that takes from the swath and hauls to Rick or Wagon 15 Tons a day. \$60 Buys a Ricker or Loader and two Rakes that puts up 30 Tons in a day. Full particulars Free. All machines warranted. A. J. NICHOLSON & CO. Springfield, Ohio.

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FOR SALE—An Aultman-Taylor ten-horse-power Traction Threshing Engine. Good as new. Address S. H. Downs, Topeka, Kas.

FOR SALE—Two yards Wyandotte Chickens, one yard Partridge Cochins. One cock and five hens each. I will sell cheap. Extra good stock. Jno. I. Hewitt, Tenth street east, Topeka.

FOR SALE OR TRADE—A Clydesdale Stallion, six years old, a splendid breeder. For this bargain, address Col. J. E. Bruce, Peabody, Kas.

WILL SELL OR TRADE—One-half blood Clyde Stallion, Annandale, Jr.; brought from Illinois; acclimated and a good breeder. W. Guy McCandless, Cottonwood Falls, Kas.

BARTHOLOMEW & CO., Real Estate and Loan Brokers, 189 Kansas avenue, Topeka, Kas. Write them for information about Topeka, the capital of the State, or lands, farms or city property.

FOR RENT—For cash, a Farm of 800 acres, fourteen miles northeast of Council Grove, Kas. It has a good house and barn and well, 52 acres broke and 640 acres fenced with four strands of barbed wire. Address S. S. Cartwright, Topeka, Kas.

FRUIT TREES.—We have in surplus, Budded Peach Trees, twelve of the best varieties, 4 to 6 feet, \$4.50 per 100. Apple Trees of all the leading varieties, largely winter, 4 to 5 feet, \$4 per 100. No. 1 Concord 1-year Grape Vines, \$15 per 1,000, \$1.75 per 100. 1-year Maple, 12 to 30-inch, \$1.75 per 1,000. Other stock cheap. We will box free and deliver at depot any of the above stock. Douglas County Nursery, Lawrence, Kansas. Wm. Plasket & Sons.

Too Late to be Classified.

SCOTCH COLLIE SHEPHERD DOGS Pups by imported "Clyde," \$5.00 each, sent C. O. D. Address, with stamp, W. A. Wickham, Cedar Bluffs, Cedar Co., Iowa.

LEVI HURST, Oswego, Kas., breeder of thoroughbred Poland-China Swine. Eighteen years in the business. Pigs shipped C. O. D. to responsible parties.

C. E. JEWELL & CO. Chattel Mortgage Loans

A SPECIALTY.

OFFICE:—North Room under First National Bank. TOPEKA, KAS.

FOR SALE!

Four Colonies Italian Bees, at \$5.00 each. Four Trios Prize-winning S. C. B. Leghorns, at \$2.50 per trio. Must be sold. Address J. B. KLINE, 924 Kansas Avenue, Topeka, Kas.

FOR SALE!

THE GRAND BATES BULL, Baron Bates 13th, 54616, (Vol 26, A. S. H. H. Book.)

Baron Bates, as his pedigree shows, is one of the best bred Bates bulls in the land. He is a beautiful red, an easy keeper, good disposition, a sure getter, and in fair working order weighs about 2,200 pounds. Is sold only because we can't use him longer on our herd. Price \$400 on cars. He cost us as a yearling \$1,000. G. W. GLICK & SON, ATCHISON, KAS.

WANTED -- BULLS!

THREE THOROUGHBRED GALLOWAY BULLS,

with good pedigrees, sixteen months to two years old. Address subscriber, naming price. Also some Cows, same breed.

S. J. GILMORE, 2758 Champa street, DENVER, COL.

JOINT PUBLIC SALE OF Short-horn and Hereford Cattle AT TOPEKA, KAS., WEDNESDAY, JUNE 15, 1887.

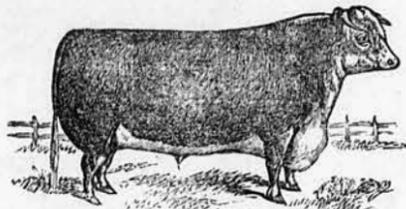
The undersigned will offer at public sale, Wednesday, June 15, 1887, at 11 o'clock a. m., at Ridgeview Stock Farm, four miles southwest of Topeka, one-half mile west of the Burlingame road,

THIRTY HEAD OF CHOICE THOROUGHBRED SHORT-HORN AND HEREFORD CATTLE,

Consisting of Bulls, Heifers one and two years old, and Cows (some with calves); also twenty-five High-Grade Cows and Heifers.

TERMS:—Cash, or six months at 8 per cent. for acceptable paper. For Catalogues, address at Topeka, CAPT. JACK HUNGATE, Auctioneer.] MARTIN I. LEF. F. R. FOSTER & SONS.

PUBLIC SALE OF PURE-BRED HEREFORDS



PLEASANT HILL, MO.,

Thirty-three miles east of Kansas City, on Missouri Pacific R. R.,

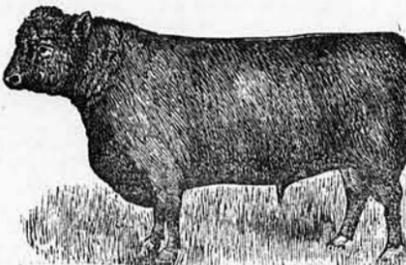
On Thursday, June 23, 1887,

We will sell our entire herd, consisting of 20 Cows and Heifers and 10 Bulls, including the fine bull, ANXIOUS 11026, by Anxiety 4th 9904. The Anxiety blood predominates in our herd, and there is a number of young animals of good individual merit among them. For Catalogues, etc., address

COL. L. P. MUIR, Auctioneer.

WHALEY & YOUNG, Pleasant Hill, Mo.

GALLOWAYS AT AUCTION



Thursday, June 16, '87,

RIVERVIEW PARK, KANSAS CITY, MO.,

I will sell to the highest bidder, my entire herd of

Registered Galloway Cattle!

And about sixty head of High-Grade Angus and Galloway Bulls, one and two years old.

Owing to declining health of my family, I propose to retire from the breeding business, and everything offered will be sold, if there are any buyers.

TERMS:—Cash, or bankable paper at four months. For Catalogue of the Thoroughbreds, address W. C. WEEDON & CO., Kansas City, Mo., or

COL. L. P. MUIR, Auctioneer.]

THOS. F. HOUSTON, HOUSTONIA, PETTIS CO., MO.

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Of Her Material Greatness.

THE KANSAS STATE FAIR!

—AT— TOPEKA, -- KANSAS,

September 19, 20, 21, 22, 23 and 24, 1887.

\$20,000.00!

IN PREMIUMS,

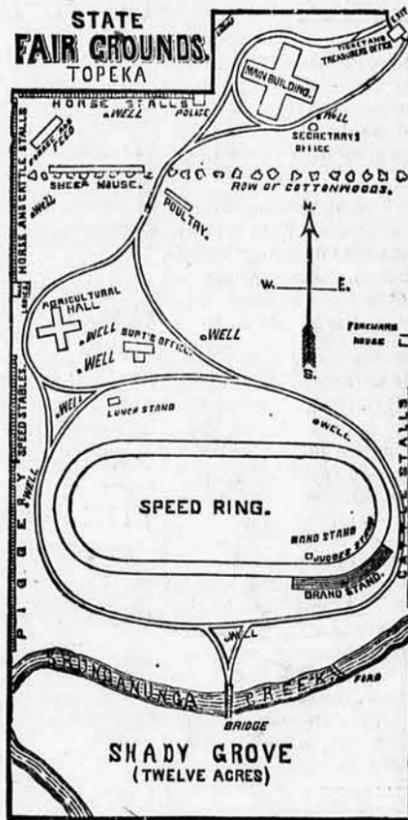
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For Best General Display of FARM PRODUCTS!

Made by COUNTIES.



\$25,000.00!

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Improvements.

CITY WATER SERVICE

ELECTRIC LIGHT.

NEW HORSE BARN, CATTLE BARN, ART HALL,

MACHINERY HALL,

AMPHITHEATER,

And the Adornment of the

FINEST FAIR GROUND and SPEED RING

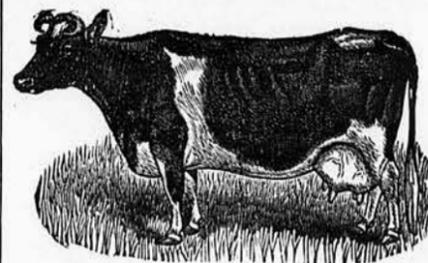
In the West.

THE GREATEST EXHIBITION OF Thoroughbred and Imported Stock Ever Made in the United States, will be at the KANSAS STATE FAIR!

TO BE HELD AT Topeka, Kas., Sept. 19 to 24, inclusive, 1887.

For information and Premium Lists, address O. H. TITUS, Assistant Secretary, OHET. THOMAS, Jr., Secretary, TOPEKA.

PUBLIC SALE.



I will sell at LAWRENCE, KAS., On Friday, June 17, 1887,

Commencing at 10 o'clock a. m., to the highest bidder, for cash or bankable notes on four months time at 8 per cent. interest, 26 Thoroughbred Holstein-Friesian cows and bulls, 14 Thoroughbred A.J.C.C. Jersey cows and bulls, 9 High-Grade Holstein cows and heifers, 8 High-Grade Jersey heifers and cows. Write for Catalogue.

WM. BROWN, Box 60, Lawrence, Kas. COL. S. A. SAWYER, Auctioneer.

TOWER'S SLICKER The Best Waterproof Coat. The FISH BRAND SLICKER is warranted waterproof, and will keep you dry in the hardest storm. The new POMMEL SLICKER is a perfect riding coat, and covers the entire saddle. Beware of imitations. None genuine without the "Fish Brand" trade-mark. Illustrated Catalogue free. A.J. Tower, Boston, Mass.