

# KANSAS FARMER

ESTABLISHED, 1863. VOL. XXVII, No. 30.

TOPEKA, KANSAS, WEDNESDAY, JULY 24, 1889.

SIXTEEN PAGES. \$1.00 A YEAR.

## TABLE OF CONTENTS.

**PAGE 1—AGRICULTURAL MATTERS.**—Farm and Field Notes. Shallow Culture of Corn. Investment in Western Farm Mortgages. Inquiries Answered.

**PAGE 2—THE STOCK INTEREST.**—Feeding Early. Raising Pigs on Oats Pasture. Raise Good Stock. Live Stock Statistics. Comments and Suggestions on Bulletin No. 6.

**PAGE 3—THE STOCK INTEREST (continued).**—Fattening the Pork... IN THE DAIRY.—Points about Milk-Cooling. Supplementing the Pastures.

**PAGE 4—CORRESPONDENCE.**—What is Making Farmers Poor? What Ails the Farmers? The Remedy. What Are We Going to Do About It? Protection Benefits the Farmer.—A Reply.

**PAGE 5—Weather—Crop Bulletin.** Topeka Weather Report. Book Notices. Kansas Fairs for 1889.

**PAGE 6—THE HOME CIRCLE.**—Life on the Farm. poem. Prohibition vs. Resubmission. 5 inshine. Letter from "Englishwoman." The Care of House Plants During Summer. Rules for Using Books.

**PAGE 7—THE YOUNG FOLKS.**—Happy Orphans. poem. Abysses of the Pacific Ocean. Some Superstitions About Precious Stones. How Large Was Ancient Rome.

**PAGE 8—EDITORIAL.**—Mr. Grover's Answer.—No. 1. Comments on Mr. Grover's Letter.

**PAGE 9—EDITORIAL.**—Come and See Kansas. Pinkerton Detectives. Horticultural Reports. The Salt Trust. Prof. Sheiton's Promotion. Mormon Files. The Kansas State Fair Open to the World. Reduce Tariff Duties.

**PAGE 10—HORTICULTURE.**—Cultivate the Orchard. Select Good Seed. Pansies—How to Raise Them. Sowing Annuals.

**PAGE 11—THE POULTRY YARD.**—A Few Practical Thoughts for Farmers... THE BUSY BEE.—Bumble Bees and Clover. Remedy for Fowl Brood.

**PAGE 12—ALLIANCE DEPARTMENT.**—Partial List of Kansas Alliances. State Officers' Names and Addresses. Notice to Committees. Farmers' Alliance Notes... The Markets.

## Agricultural Matters.

### FARM AND FIELD NOTES.

Keep the potato ground clean and mellow. Early sown rye makes excellent fall pasture.

For turnips the soil ought to be rich, clean and mellow.

Breed the horse first for strength and endurance, and then style.

Don't let weeds take possession of the farm or of any part of it.

Take up the cut grain as soon as possible, lest wet weather damage it.

Idle land, like idle men, is apt to become worthless, producing nothing useful.

Don't put straw manure on land at any time unless it is plowed under at once.

One of the highest duties of the farm family is to eat of the best the farm produces.

Keep cattle out of pastures when the ground is so wet that their feet leave holes.

Turnip seed may be sown on well-prepared soil any time now and for the next four weeks.

After potatoes are removed the ground may be easily mellowed and leveled and cleaned for turnips.

Market clean wheat the coming fall, if possible, and keep the offal at home; it is an excellent stock food.

See that weeds are kept down in all young grass fields. Mow them before they go to seed, and let them lie on the ground.

Ground ought never to be left without a crop growing, or ripening, except only in cases where it is being prepared for seeding.

During the hot weather horses shoulders are apt to become sore unless they are kept well cleaned. Every farmer should keep on hand a good article of castile soap to use in washing sores; it is also excellent to bathe the tender shoulders with.

### Shallow Culture of Corn.

EDITOR KANSAS FARMER:—Mr. "P. O. D.'s" article in the KANSAS FARMER on the cultivation of corn reminds me of a case I once knew of a man who had a very severe attack of bilious colic and sent for a doctor, but when the boy got to town the medical man for some reason could not go, but gave the boy a bottle of morphine and told him to give his father some every half hour till he got relief, but did not tell him how much to give; the man took too much, went to sleep and never awoke again. I once had a fine eighty-acre piece of corn that I treated as Mr. P. O. D. directs (cultivate, cultivate,) with new Weir cultivators drawn by strong teams. I thought then with many others that the

each to get them made. Since I have adopted my present system of cultivation I always have as good if not better corn than any of my neighbors. I, too, say cultivate, and cultivate thorough, but cultivate shallow after the corn is well advanced and don't lay it by too soon. Most men stop cultivating their corn when they can't straddle the rows with a two-horse cultivator. This is all wrong; the ground should not remain idle so long as to bake on top and crack—the very best condition to lose the moisture that should be retained to help form the grain.

When farmers think more and study the science of farming more they will make more out of the same labor and enjoy farming better. We should understand the reasons why we perform all work pertaining to our calling.

E. P. C. WEBSTER.

**Investment in Western Farm Mortgages.**  
The St. Paul Pioneer-Press discusses the subject this way:  
"Plenty of evidence can be found, without going to the records, on the face of affairs,

payment of 25 cents per acre. In a few years he has paid this off, has got his fields into passable condition, and sees safely ahead if he can only have the use of a little capital. He wants a modest house for his family instead of a shack, some good horses and cattle, and machinery that will enable him to make the most of his land. And he has also a property which is now adequate security for a larger debt. Let us suppose that he puts on a mortgage for ten times the original amount. That would be one of the incidents that alarm the croakers over farm mortgages. But it would, in fact, be a sign of prosperity. It would not be one-half the burden upon the farmer that the debt of his first poverty proved, and principal and interest could be paid with infinitely less effort or sacrifice.

"This is the story of farm mortgages in the West. They are an evidence, sometimes, it is true, of bad seasons, poor crops, and the straits through which every farmer, wherever situated, must pull himself occasionally. But, as a rule and on the whole they tell rather of increased wealth, increased ability to employ and remunerate a greater capital, and increased net returns to the cultivator. With the constant increment in the value of his land, he pays little attention to the alarms of those who knew so much less about him than he does about himself. Some years ago it was a favorite reproach to Chicago that the entire city was owned by Eastern capitalists, and it was pretty nearly true. But Chicago is still there, apparently none the worse for it, and the Eastern people who made investments, instead of speculations, have not suffered for it. The ability to borrow is sometimes as accurate evidence of prosperity as the ability to pay. Mr. Edward Atkinson has disposed of the hallucination that farm mortgages in the West are anything less than the safest and surest form of loan investment."

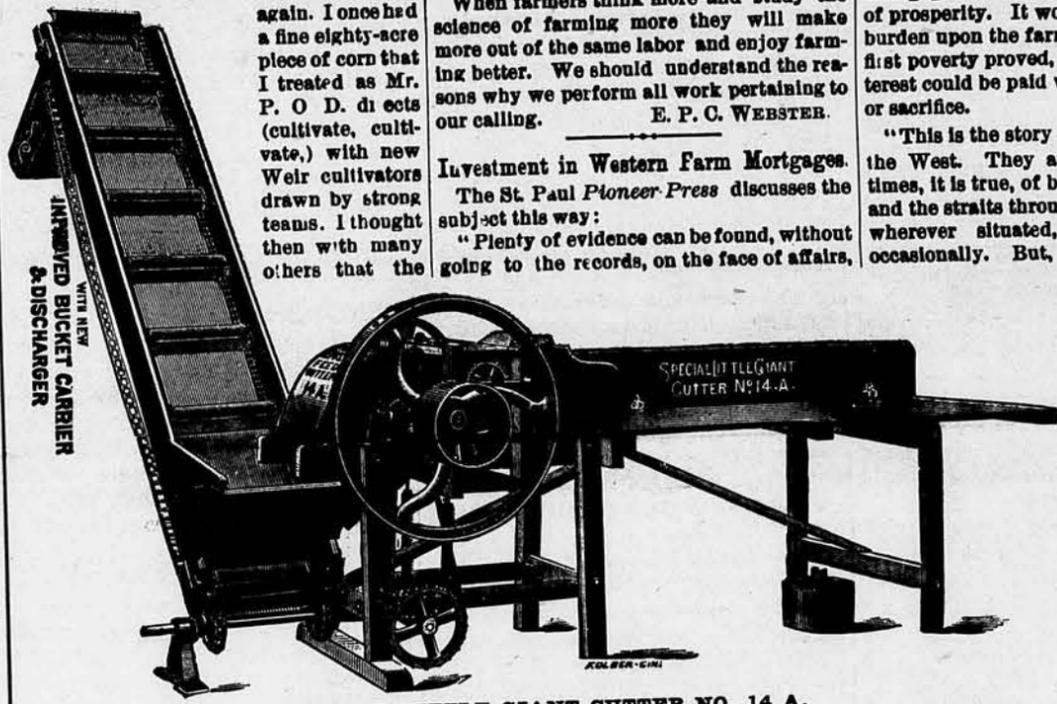
### Inquiries Answered.

**FODDER HARVESTER**—Has there been invented a machine that will successfully harvest corn fodder, sorghum cane and like crops? If there is such a machine made many of your readers would be benefited by knowing the name of the manufacturers.

—We do not know of any machine made specially for this work. There are machines to cut up corn, but for cutting corn that is grown for fodder only, and for cutting cane grown for a like purpose, farmers use their harvesting machines, reapers and binders.

**CANNING CORN.**—I wish you would state how sweet corn is canned; have tried it myself but failed.

—The only difference between corn and fruits as to the matter of canning is, that corn requires a greater heat, or, what amounts to the same thing, longer boiling at the same heat. A farmer's wife is not prepared to produce the greater heat required, but she can keep the boiling in continuous operation about four hours, at the highest degree of heat she can produce, and that will do the work. Have the corn in cans or in covered tin vessels of any kind kept in boiling water four hours, then put away just as you do anything else that you are canning.



SPECIAL LITTLE GIANT CUTTER NO. 14 A.  
MANUFACTURED BY E. W. ROSS & Co, SPRINGFIELD, OHIO. [SEE ARTICLE HEADED "ENSILAGE"]

cultivator's shovels should run in full length, so I let them run in, and in the fall I estimated my loss by too deep cultivation at \$240, basing my calculation on the yield of an adjoining field which I thought at the time it was being worked was not half done, as their shovels did not seem to scour half the time and consequently did not run in deep, and their horses were so poor and light that they could not pull what I called a good cultivator. I bought their corn and had a chance to know how much more they got per acre than I did.

From that time on I ceased to go it blind as before, and began to study the matter, and came to the conclusion that when the corn is large enough to have sent roots clear across the rows, those rows should not be disturbed by the cultivator, but that the cultivator should be above them. My plan now is to list my corn in, so that I may have it deep-rooted. Twice over with two-horse cultivators as a rule is all that I can give it of that kind of medicine without disturbing the roots; after that I work it with one-horse harrows, going through it frequently until the ears are beginning to form. In that way I keep the surface stirred and fine, thereby arresting evaporation and retaining a large share of the moisture that would be wasted if the ground is allowed to lie still. This harrowing also kills about all the late weeds and leaves the field with a smooth, level surface, with no furrows to carry off the fall rains should they come. My harrows are double-A harrows, so constructed that they can be expanded to three and a half feet or contracted to two feet in width; they have thirty-eight teeth set so that they cut within an inch of each other. They are all iron or steel except the handles, and cost me \$6

if any agricultural country is really getting into arrears. There are little pieces of territory, here and there, especially in the East and south, where this has happened. A series of improvident tillers have impoverished the soil by working it for all they could get out of it. This, with the changes in the markets which the development of industry is making constantly, the in-rush of a new and superior supply, or the deflection of channels of commerce, sometimes leave the farmers of a limited region stranded high and dry. In such a case you may see waste and barren fields, farm houses and outbuildings falling to ruins and the general air of dilapidation which tells a story plainer than the books of a Register of Deeds. And it is just as true that where you find the evidences of comfort and thrift, where farms are well kept and improvements made steadily, there the condition of the farmer is bettering, even though owing twice as much per acre as he did a short time before.

"It is singular that two different standards should be set in the case of farm mortgages and municipal indebtedness, when the cases are exactly parallel. There is scarcely a large city in the United States whose debt is not growing annually. Yet nobody, measuring that indebtedness by a comparison with growth in population, in business and in the improvements necessary to the public, deems the city's credit affected, or hopes to get its bonds at a discount. The increase, in some States, of the aggregate of farm mortgages tells precisely the same story. Take the case of a settler on the prairie. He goes upon his claim with only sufficient cash to support him through the period that must pass before he can harvest a crop. He puts a mortgage on, let us say, to cover a

## The Stock Interest.

### THOROUGH-BRED STOCK SALES.

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

JULY 30—Wm. J. Miller, Percherons and Short horns, Belleville, Ill.  
OCTOBER 8—John Lewis, Short-horns, Miami, Mo.  
OCTOBER 9—John Lewis, Poland-Chinas, Miami, Mo.

#### Feeding Early.

EDITOR KANSAS FARMER:—Some classes of stock should be on the market reasonably early, and after cold weather sets in the longer they are fed the less will be the per cent. of profit. This is especially the case with poultry and hogs. Early in the fall prices are usually good, but so many are getting ready to sell that the market gets overstocked and prices come down. With poultry it will be better to either sell early in the fall before the market is overstocked or be prepared to feed until after the holidays. For sometimes as soon as cold weather sets in prices get low and stay so until Christmas. By this time the greater per cent. that is for sale has been sent to market and prices improve until young chickens come in freely. Of course this is not always the case. From different causes the market will be up and down, and who can keep thoroughly posted may be able to take advantage of the rise and fall and sell profitably, but on an average the better plan is to crowd whatever can be made ready early and then sell rather than to delay and get ready after the market begins to get overstocked. Late hatched poultry, and especially chickens and turkeys, can be kept until after the holidays at a small cost if a good comfortable house is provided, and in a majority of cases the better price that can be realized will pay well for the additional cost.

For several years past hogs that have been ready for market reasonably early in the fall have sold at better prices than at any time until after the first of January. The average farmer is illy prepared to feed hogs to an advantage after the weather gets cold. The hogs, as a rule, or at least a large per cent. of them, are ready for market by the time severe winter weather comes in. By this time packing begins and packers are interested in receiving their supply at as low a price as possible and manipulate the market as far as they are able to this end. Reasonably early spring pigs, if they have been kept growing, can be made ready for market reasonably early. If hogs are fed to maturity it is no object to sell until they are fully ready, neither is it good economy to feed after they are ready. After a hog reaches a certain stage he will gain very slow, and the most profitable plan is to sell. But if sold before this there is a loss that ought to be avoided. Generally if hogs are to be sold early, feeding must be commenced reasonably early. Giving them corn night and morning, a light feed at first and gradually increasing until they are fed all that they will eat up clean, let them run in a good pasture and feed well and water regularly and they can be made ready for market reasonably early, and as soon as they are ready sell. Hogs will gain very rapidly early in the fall on new corn and grass or clover, and if good care is taken to push, can often be marketed with more profit than if fed later. N. J. SHEPHERD.  
Eldon, Miller Co., Mo.

#### Raising Pigs on Oats Pasture.

EDITOR KANSAS FARMER:—If you have an orchard of two or three acres that you wish to cultivate or keep the weeds down, fence it in pig tight; sow as early as the season will allow in oats, and when they have grown sufficient for pasture, ring your sows and turn them in. If you have any slop or milk to give them, this is all the feed they need to raise a good litter of pigs. This amount of pasture is sufficient for four or five sows, with a reasonable amount

of rainfall. They will live and raise the pigs until the oats are ripe enough to grow. Then plow one-half of the patch under, leaving the other half for the sows to live on, at the same time adding a little feed until this comes up sufficient for pasture, then plow the other half. By so doing you will raise twenty-five or thirty good thrifty shoats with no expense to speak of. Be sure your sows have free access to pure water. You can wean the pigs at two and one-half months old, and breed the same sow in eight or ten days after weaning the pigs, thereby raising two litters in one season. Be very careful and breed nothing but pure blood. You can market the spring pigs at nine, ten or eleven months old at a weight of from 200 to 240 pounds per hog. If any man can raise cheaper hogs than this allow me to ask him to reply through the columns of the KANSAS FARMER. A. A. LITTLE.  
Little River, Rice Co., Kas.

#### Raise Good Stock.

Messrs. Dietrich & Gentry, of Highland Stock Farm, Franklin county, among other things in a recent letter, gave the following stock news and excellent advice:

"Stock of all kinds are doing well and the only drawback to stock business is the prevailing low prices, and yet the stock business is the support and source of wealth of this county. More horses have been shipped from Ottawa this season than ever before, and the money left has helped many a farmer through the season. Good horses always sell for something, while scrubs cannot be sold for anything in times of low prices. Farmers, it costs but little more to breed a good horse and no more to raise a good colt, and when the colt becomes a horse you can get double for the good one; then why not breed the good ones? Don't fool away your time and money in trying to raise fast horses, but raise something that makes a good farm horse and at the same time a horse that can be used on a carriage if necessary. One thing more on this subject and that is, when you have your horse to sell take a little time to thoroughly break him, groom him well for three or four weeks, curry out his mane and tail, have him drive free and easy, and by all means in good flesh, and you will find that you will get from 15 per cent. to 25 per cent. more for him when you sell him.

"Cattle-breeders here are discouraged, but many are determined to hold until the change comes. Hogs are having a great deal of attention at present, and from all we can hear think the prospect for a large crop is good."

#### Live Stock Statistics.

EDITOR KANSAS FARMER:—It would be a matter of no small interest to farmers and live stock breeders if the Department of Agriculture at Washington, in its efforts to increase the value of its monthly and annual reports would recognize the fact that live stock breeding has undergone a great change in the last twenty years. The founding within this time of forty or more live stock associations, each publishing pedigree records of the breed to which it is especially devoted, attests the wonderful advance in the breeding and dissemination of pure-bred stock throughout the country.

Public records of breeding stock are no longer looked upon as experiments. In the mind of the intelligent breeder, and before the law, they have a place and value as fixed as is the title to ownership in the animal itself. What will wheat be worth at threshing time, and is it advisable that we sow more, or that we sow less than usual next fall? The information gathered and analyzed by the Department of Agriculture and given us from month to month is intended to help determine such questions, and we are disposed to rely on the conclusions reached by the Department.

We recently sold several good horses from the farm and have been thinking of replacing them with as many brood

mares. The Percheron and Clydesdale breeders tell us there is no danger of the heavy draft horse business ever being overdone here. The Cleveland Bay breeders assure us of a great future demand for coach horses, and breeders of trotting, pacing, and running horses each insists that his respective favorites are at the point or rapidly coming there, and that we will have made a mistake if we stock up with other than what they recommend.

We turn to the Department of Agriculture. Its stores of information throw no light on the future of horse-breeding. It tells not which breeds have been or now are in the greatest demand; nor does it even approximate the number of pure-bred horses in the country. The time was when carefully gathered statistics showing annually the number of horses and cattle of different ages, as well as of sheep and swine, in each State, was all we could expect. Values were then based on age; the animal being near or remote from its highest value for use or for market according to its age.

The breeding and rearing of live stock on the farm is in many respects quite different now from what it was some years ago, and it seems fitting that a corresponding change should be made in the series of questions given out by the Department of Agriculture for its correspondents to answer.

I will venture to say it would be of greater interest to hundreds of breeders and farmers to know, for example, the number of pure-bred sires of a given breed used in a given territory or in the State at large than to know the whole number of horses, cattle, hogs and sheep grown during the year in the same locality. PHIL THURFTON.

#### Comments and Suggestions on Bulletin No. 6.

EDITOR KANSAS FARMER:—Bulletin No. 6, Kansas Experiment Station, says: "Every practical man familiar with the facts understands that corn fodder in Kansas is a very different thing from the article of the same name raised in New England and Middle States. Here the corn plant in all its parts reaches a development quite unknown in regions of shorter summers and poorer soils." This is true; but the following is not true, and is contradictory of the above: "The proportion of leaves and blades (edible fodder) is doubtless much less with Kansas corn than with the small-growing Eastern sort." Kansas corn produces an immense amount of the very best fodder, if cut at the proper time, in the proper manner. It is cheaper and better than wild grass hay for all kinds of stock if properly fed to them. If one has a large amount to cut it should be planted at different times with different varieties, that it may not all ripen at one time. If help is scarce it should be cut when the husks begin to dry on half or more of the ears. It should be cut high, just so high that the ears will not touch the ground when set in shock. The leaves below this point are of little value, mostly dead or dying, and the stocks worthless. Here is where Prof. Shelton gets most of the waste he complains of—worse than waste to cut and handle all this worthless stuff—and the shocks will not stand so well when fodder is cut long. Make the shocks large—fourteen to sixteen hills square; shock with a jack and have no "galuses" of green corn in center of shock. See that it is set straight, and tie well every evening all cut during the day. We use binding twine, and tie about two feet from the top. We use a windlass to draw up the shock before tying. It is a piece of hard wood about two feet long and four inches diameter, with a cross for handle mortised on one end like a gimlet handle; the first piece is dressed to a point, and a half-inch rope fastened to it near the handle by drawing tightly through a hole, the rope ten or twelve feet long, enough to go around any shock. One man pushes the instrument into the shock at the

proper place, another takes the rope around the shock at the proper level to the instrument, and fastened to a hook. We use simply a large screw left out sufficiently to catch the rope. The man at the instrument turns it as tightly as the twine will bear and sticks one of the handles in the shock to hold the twist. The twine is placed around above the rope and tied. It is much quicker done than written, and shocks never fall unless twine breaks. We cut thousands of shocks of fourteen hills; stubs will average more than three feet, and shocks never fall unless twine breaks, and that we watch for several days. We raise the corn and fodder to feed, and feed it without husking or handling except to throw it in feeding racks. The wagon with fodder rack is drawn by side of shock, a rope with noose or small chain running through a ring is thrown over the shock and a horse upsets it onto the rack. Three shocks can be loaded in three minutes with no handling or waste whatever. This fodder wagon had better be described, as we have not seen or read of anything like it, and its use on the farm for hauling manure, posts, wood, machinery, etc., in fact, the most useful thing on the farm. Two joists of hard pine of best quality, 2x10 inches and twenty-two feet long form the sills; the front ends are placed together, the rear ends are separated more than the track of the wagon; front ends are then bolted with two one-half inch bolts, and behind these a wedge is placed between the joists and spiked through them, leaving room enough in front of it (or hole bored through it) for inch rod to pass, which should screw through a piece of three quarter or inch iron which extends across both joists and is notched into them the thickness of it to support the rack; above the joists and close to them this rod forms an eye, in which is a long link of same sized iron; this link is long enough to hook over a nose or heavy point made on the front of a heavy flat piece of iron which takes the place of the reach of the wagon and through which the bolster-pin passes; when the large link is hooked on the nose it should lie against the hound of the wagon, as it may have a great weight to support and should have all the advantage possible; the link should be of the length to support the frame about eight inches above the ground, or bottom of wheels; the large flat piece of iron just back of the hound should have a hole large enough to receive two three-quarter inch rods, which are hooked through the hole, bent back on themselves and welded; these rods are two and one-half feet long, with an eye on the other end, through which they are bolted with heavy bolt to the frame timbers. Thus we have the draft and the support of the front end of frame. Suppose this is placed on front axle of wagon, then just in rear of the wheels a piece of 2x8 is cut to fit between the joists, placed between with edge up and spiked. Now the rear ends of the frame is pressed together half way from where they have been to the standard of the rear axle, then another piece of 2x8 is cut to fit half way from the first piece to the rear wheels, placed in as the first one, spiked and a half inch rod passed through by its side and screwed up tight. Now the rear ends of the frame are pressed into a line with the inside of standards of rear axle, another piece placed between, spiked and rodged as the other. Take two pieces of three-quarter inch rod iron three and one-half feet long, let eight or ten inches hang straight down from the top of the axle with hook on the end, bend it flat on the axle and then downward until the eye on the other end reaches the center of frame and then firmly bolt. Then make a long link of same iron to fit over the end of frame timber, make a notch to fit the link about three inches from end of timber, slip the link over into the notch and hang up to the hook. Take 2x4 of strong wood five and one-half or six feet long, and place three inches in

front and rear of wheels and three pieces equally divided between and spike fast, and lay a tight floor. But before the floor is laid take four pieces of 2x4 of suitable length to shield the wheels, place them on outside of frame in front and rear of the end cross pieces, plan them properly and bolt and spike to frame, and place a few boards across them above, and one has the most complete rack for fodder or manure imaginable. Sixteen feet boards just fit the floor. This will run far easier than low wheels and places the rack lower than any wheels will allow, can be taken off in a moment. John Gould ought to catch this idea, as well as many other prominent instructors.

We are just now stacking 140 acres of mowed oats for feeding in the straw as hay. We aim to cut it in dough and milk stage. We use no other hay, and know of no other its equal.

Prof. Shelton speaks of the difficult and wasteful task of husking shock corn. Why husk it? They have a Ross No. 13 cutter; ought to have a No. 17—worth a dozen No. 13. I presume they feed what they produce. Why not choose a proper time in the fall, have a barrack or barn to store the feed and run through the cutter some loads of shock corn, cut the proper height at the proper time, hauled on a proper frame? Then some loads of mowed oats, cane or clover, or anything he may have to make a proper ration, for the purpose he wishes it, until the barn or barrack is full, and feed by cutting down from and mixing it? The cost of cutting up corn is not greater than husking from the stock, to say nothing of the loss of corn left in field, often greater than the cost of cutting. The silo is all right. Am in favor of silos. Have one where I keep clover; wish I had a dozen. MINTURN.

Colwich, Sedgwick Co., Kas.

#### Fattening the Pork.

Raising swine for market on a large scale is profitable when properly conducted; but since the industry has grown so extensively out West new swine diseases never before heard of have come into existence. The cause of this can easily be traced. Corn farms have grown along with the pork industry, and the swine have been fed a monotonous diet of corn and oily food. Our swine need more clover and less corn. Disease would then be less disastrous and less frequent. Our pork would be as good, and our lands improved by the change. The clover would tend to build up the soil that has been exhausted by the heavy crops of corn, and the farmers would be vastly benefited. If young pigs are turned out in the clover lot in the spring and allowed to graze until fall they will not be fat, but they will have large, healthy muscles and bones, and a keen appetite for corn. Then the fattening stage begins, or should begin, and the fat will increase rapidly. The animal will digest the corn better when in such a strong, healthy condition, and will not be so liable to disease. Such a hog seldom sickens, and the cost of raising one in this way is not more expensive than raising one entirely on corn. The clover fields should be brought into more general use, especially in the corn and pork-producing States. Statistics show that disease deducts from the profits of pork 10 per cent. annually of the entire product. This is a big item, and if it could be eliminated the profits of this industry would be much greater.—*Farm and Vineyard.*

#### Choice Heifers and Bulls

For sale—A number of thoroughbred Short-horn heifers already bred, also a few choice bulls, on terms to suit purchasers. Address T. P. BABST, Dover, Kas.

As soon as the mower or reaper has done all its work for the season, clean it well, or what is better, paint the whole machine, oil all the iron and steel parts, and then put under cover.

BEECHAM'S PILLS cure sick headache.

## In the Dairy.

### POINTS ABOUT MILK-COOLING.

A correspondent of *Country Gentleman* asks a question and another correspondent answers, as follows:

I am thinking out plans for a dairy house in which I wish to apply the principles of cold storage, if I understand them rightly. Would like to know whether milk set in deep cans, placed in a refrigerator or cold chamber in which the air is kept at say 38 deg., will do as well and yield as much cream in the twelve hours as if set in a water tank with water at same temperature, for same length of time. My idea of the requirements for a good dairy house for deep setting of milk are, first, a tank, box or refrigerator in which to set the milk and raise the cream temperature to 38 deg. to 40 deg.; then a chamber for keeping cream to ripen, to churn and make up the butter, and keep the butter temperature at from 58 deg. to 60 deg.; and lastly another room with a stove or boiler in it to heat water for washing utensils, etc., and in winter to warm the dairy proper. To keep the tank and dairy room down to the proper temperature in summer, an ice house or chamber would be needed, either alongside or over them. Can you or any of your readers assist me with plans or suggestions, or if any of my ideas are incorrect, put me right? I propose to build in the fall, to be ready for making my winter butter next season. I keep from twenty to twenty-five cows, and try as nearly as possible to have a steady production of butter the year round, though I find it impossible to get as many cows to come in in the fall as in the spring. This week, with twenty-one cows out on grass, and fed a little clover hay night and morning, we made 164 pounds of butter. The cows are Guernseys and Guernsey and Jersey grades.

I hope for some assistance through your columns, from which I have often obtained most valuable information.

Knowlton, P. Q. S. A. F.

Cream will not rise nearly so well in cold air as in water of like temperature. When the "element of cold" is used as an agent in cream separation, the nearer the process can be made to approach the instantaneous the better. Water is several times better as a conductor of heat and cold than air, i. e., it absorbs the heat more readily, and this holds good in the rapid cooling of milk; the water quickly absorbs the heat, and even then it is difficult to get all of the cream from milk in twelve hours. The degree indicated by Mr. F., 38 deg., is at least 4 deg. too cold to get the best separation. The simple action of cold is not to make milk cream better by the rapidly falling temperature, but the rapid cooling causes changes in the properties of the milk, causing certain influences to be retarded and giving the fats more freedom to rise, just as it is proved that delay in milk-setting, allowing the temperature to fall before it goes into the cans, produces a change in properties or conditions that causes part of the fats to refuse to rise.

It is now thought by Prof. Babcock that the value of rapid cooling of milk down to 42 deg.—the more rapid the better—is in retarding the formation of fibrin in the milk. A can seven and one-half to eight inches in diameter, not over twenty inches in depth, filled with milk directly from the cow, and set in a tank of water at about 42 deg. is as perfect gravity creaming as is known. A water box with a close-fitting cover, deep enough to readily set cans twenty inches deep, and filled with water with ice enough to maintain 42 deg., into which the cans of warm milk can be set, and the cover shut down to prevent contact with the air of the room, makes a very good and cheap creamer. If a slow current of fresh water can be maintained, all the better. The water absorbs all that is evaporated from the

milk, so needs to be either changed occasionally or supplied from a continual source and "waste" provided for. Cream to ripen well should be kept at as near as possible the churning temperature, say at 60 deg.

Just now a great deal is being said, *pro* and *con*, about cream-ripening, by the employment of some plan of maintaining uniform heat, or heating to 75 deg. or 80 deg., and allowing it to slowly cool down to 62 deg., or get the later advanced plan of using a sour milk "starter," and keeping the cream in a close, jacketed can, where a temperature of 62 deg. can be maintained with little variation. Each of these plans needs to be studied into, and the one adopted that will best meet the conditions that have to be met at the dairy farm.

Fine butter production calls for a special dairy house, with rooms adapted to the different needs of butter-making. I doubt the propriety of the maker using cold storage at his end of the route, for when in cold storage for any length of time, and then shipped to any considerable distance, the change of temperature will destroy the aroma. It is better to have the cold storage at the market end of the traffic, and let the consumer take it there and consume it as rapidly as possible.

Mr. Fisher intimates that he is to go into winter dairying. With it he will find many things to look after quite as essential as a dairy house—a warm barn and well-appointed stables with water in them, and, quite as important, an abundance of best milk-producing foods, among which a big silo of well-matured fodder cannot longer be profitably overlooked. The conditions of summer must be continued through the greater part of the year. It is now possible to make butter in the winter as cheaply as in the summer, but to do this there must be good conditions at all points. For butter-making, Mr. F. seems to have a special dairy already, and if he will make food, buildings, apparatus, etc., to conform with each other, he will no doubt succeed; for, compared with the usual butter cow, his dairy, with its pound and above of butter each per day, seems a good one.

It is somewhat difficult to have the cows all come in just as one wants them in the fall, ready for winter milking. The only partial remedy is to have them begin to "fresh" by the last of September. If the first ones only begin to calve by November 15, the probabilities are that nearly one-third of the dairy will go on the late or even farrow list, and that is one of the most serious of the drawbacks of winter-dairying. While the conditions of dairying are somewhat different in Canada than those existing in the United States, still the principles that largely contribute to excellence are so nearly universal, that in the main the "law and gospel" of dairying can be everywhere accepted as a guide. J. G. Western Reserve, O., May 25.

#### Supplementing the Pastures.

The man who keeps cows ought to provide a liberal quantity and an excellent quality of food during the entire year. This course is not only the expression of a humane feeling which would give the animals as much enjoyment of life as possible, but it is also the method indicated by a sound financial policy. If no higher motive will avail, the principle of self-interest should induce the live stock owner to feed all his animals in the best manner.

There are a good many men, in all, who are more careful of their cows in winter than they are in summer. If there is to be any difference it is well to have it in this way, for cows can endure neglect in mild weather with less suffering than they can in winter, and the loss to the owner, which will certainly be involved, will also be less in summer. In many cases this neglect is not for the sake of saving money or labor, but is due to mere thoughtlessness. Yet it causes suffering and loss just as truly as it would if these ends had been deliberately chosen. When Thomas Hood wrote the lines—  
But every evil is wrought by want of thought  
As well as want of heart,  
he expressed a truth which applies not

only to man's dealing with men, but also to his influence on the animal world.

Every farmer sees, for he can help seeing, that in the winter he must supply his cows with whatever food they have. A great many have learned that it pays to feed liberally at this period. But some who have reached this point seem to believe that during the summer the animals can shift for themselves. So the cows are hustled off to pasture and are supposed like travelers in a railroad restaurant to "pitch in" and make the most of their opportunities. If they don't look out for themselves the owner is sure that it is their own fault. In his view he has faithfully performed his part when he has furnished the pasture and put the cows therein. To be asked to do more than this he would think was an imposition.

But the quantity of the food which will grow in the pastures in any given summer is unknown. It may be very large. If the season is favorable it will probably be ample, at least during the first two or three months. If a severe drouth sets in, as is frequently the case, the grass will not be luxuriant and may become very scanty. Yet the number of animals to be kept in the pasture is determined while all this uncertainty exists. Consequently there is a necessity, if the comfort of the cows or the finances of the owner are to be considered, for something which shall supplement the pastures. Some crop should be grown which can be used during the summer if needed, or if not then required can be dried for winter use.

This necessity for something to supply a deficiency which may be occasioned by drouth, and to help out the pastures when they begin to fail late in the summer exists just the same, whether the cows are kept for winter dairying or to yield the largest possible quantity of milk in the summer. Because a cow happens to be dry is not a reason why she should be scantily fed. The ill results of insufficient food at any period will be seen long after a better system of feeding has been adopted. The farmer who is trying to economize in this manner is getting on his coat the wrong side out. Good food, and plenty of it every day in the year, must be supplied, if the cows are to yield all the milk they are capable of producing.

One of the best crops for the purpose indicated is fodder corn. In many sections it is decidedly the best which can be grown. It makes excellent food, cows like it, a large quantity can be grown on a small area of land, and the cost of production is very small. It is not an exhausting crop for the land, and it does not interfere with a proper system of rotation.

Another point in favor of this crop is found in the fact that it can be grown upon almost any kind of land that is at all suited to cultivation. Of course, it does much better on some soils than it does on others, but it can easily be made fairly successful almost anywhere in this country. It pays to fit the land well before the seed is planted. Up to a certain point the richer the land is made the heavier will be the crop, but on land of only moderate fertility the application of a fair quantity of manure will be reasonably sure to give a fair yield.

Then, too, any surplus after the summer demand is over may be dried and kept for winter feeding. I always intend to grow more fodder corn than will be needed in the green state. There is no difficulty in curing the crop, and if it is well cured cows like it and do well when they have it. On many farms the growing of less corn for ears and more for fodder would be a very profitable change.

As a fodder crop corn should be planted in drills at least three feet apart. If on sod ground, or on land that has been kept fairly clean, it will need little or no hand-hoeing, but the cultivator should be freely used. It is a great mistake which many commit, to plant too thickly. From four to six grains of corn in each foot of drill will be ample seeding unless a dwarf variety is grown. Even then it is a question whether the latter number is not to be preferred to a greater one. Heavy seeding will give a greater weight of material, but as it will not allow us free access of sunlight and air the stalks will not be as fully developed as when grown from a smaller quantity of seed.

As to the variety to plant, opinions differ widely. On general principles sweet corn would seem to be better than the ordinary kinds. I sometimes grow part of each. Between the large Southern and Western kinds and the medium-sized New England varieties I very much prefer the latter. They seem to give a larger proportion of leaf to stalk and they are certainly much easier to handle. If wanted for winter use the medium sorts are far more readily cured and they require less room in which to be stored.—*Elliot, in American Dairyman.*

**Correspondence.**

**What is Making Farmers Poor?**

EDITOR KANSAS FARMER:—I see the above question in one or more of the recent issues of the KANSAS FARMER, and as but few have seen proper to offer a solution, I will with your permission enumerate some of the causes which are contributing to the unprecedented financial embarrassment which is generally prevalent among the farmers and which is causing them as a class to lose their homes and become poor in a degree wholly unknown until within the last few years. Says one—bad financing is the cause. That this defect is playing its part in about the same degree that it has in every age, is true; but to assume that it is the sole cause or anywhere near it is not correct, nor has any really intelligent person to my knowledge attempted to offer any evidence pointing in this direction.

I hear it insisted upon that the farmers are less industrious than they formerly were, yet a fair and candid examination of statistics proves beyond all doubt that the products of the farm in every State of the Union have been as abundant during the last twenty years, in proportion to the numbers engaged in agriculture, as in any other similar period of time. Then this assertion will not do. More especially does it fail to answer the question in presence of the often-repeated statement that there is an overproduction of all the farmer raises. I cannot believe the former assertion, nor shall I consider myself warranted in believing the latter assertion until I see, or have reason to believe, that all of our laboring people are supplied with that part of the necessities of life which come directly from the farm. But I shall continue to believe as I have for years, that the day laborer is so poorly paid that he can neither buy the necessities of life in such quantities and of such qualities as are really necessary to the maintenance of perfect health nor that will pay the farmer anything more than the cost of production. Again, it is urged that farmers as a class indulge in ruinous extravagance in the purchase of machinery, household goods, wearing apparel, etc. That there are cases of this kind is unquestioned, but it fails to afford a rational solution to the question under consideration; for when we look farther than to make a mere casual observation and widen our investigation sufficiently to reach the real facts, we find that there is no list of articles of diet more inexpensive than that of the farmers as a class, and their wearing apparel, in a large majority of cases, is of the very plainest and cheapest grade. Not one farmer's wife or daughter in fifty can afford a silk dress: in fact, a large majority of them are never seen with a dress that cost one-fourth the price of a good silk dress. That some of them do purchase farm machinery that they might do without is a fact, and many of them have been and still are buying machinery and are giving their notes bearing rates of interest ruinous to themselves, while the profits on the same, together with the rates of interest realized by the manufacturer, are making millionaires of them. This mode of transacting business is too well known to admit of a doubt. It is also well known that the notes given for farm machinery are in many instances secured by iron-clad mortgages, which not infrequently take back the machine purchased together with other property that is worth more than the article purchased ever was. All of us are aware at the time of purchase that to give any one such an advantage is hazardous, but in order to farm the seed must be planted, the growing crop must be cultivated, and when matured it must be harvested, and without implements to work with this cannot be done; consequently in numerous instances the farmer cannot avoid giving the advantage above described, for this is a general custom. That is, the manufacturer and salesman dictate the terms. A better and safer system to the farmer and no less safe to the salesman surely can be and ought to be adopted, so that the farmer who feels himself driven to the extremity of being forced to go in debt need not have his home swept from under him without a fair chance to pay his indebtedness.

But this is not by any means the greatest source of drainage to the wealth produced by the farmer. The organization of a beef trust, a sugar trust, a twine trust, a salt trust, a lumber trust, in fact trusts and combinations of every kind by and through which every conceivable advantage has been and is being taken of the natural laws of supply and demand are tolerated, whereby the purchasing power is taken out of the products of the farm to such an extent as to

render this pursuit unprofitable. Our legislative assemblies, both State and national, are responsible for their existence, for they have permitted them to spring into existence before their very eyes and have permitted them to prey upon the industries of the country with scarcely a shadow of hindrance. In order to show the lamentable condition into which the market for farm produce has fallen, I would refer to the published report of the State Board of Agriculture of Illinois, in which it is shown that the corn crop of that State has been produced at a total loss during the past five years of over \$50,000,000. And in the presence of wheat gamblers, cattle trusts, etc., no other branch of agriculture can pay any better. Here, then, Mr. Editor, we find some of the unmistakable reasons why the farmers are becoming poor. In this connection it is proper to state, also, that our national Congress permits the importation of pauper labor which causes the millionaire manufacturer to realize a gilt-edged profit of his manufactured goods, while American labor goes unemployed or is compelled to work for such wages as will not admit of paying the farmer remunerative prices for his products. The imported pauper is as fully able to pay a living price for the farmer's products as the native American laborer.

But there is still another reason for the farmers' impoverished condition; it is at the very bottom of our trouble and renders us culpable to an extent wholly unjustifiable and inexcusable. It is, that the farmers have from the very foundation of our form of government persisted in electing men to represent them in their legislative assemblies almost exclusively who have not been farmers themselves and therefore had next to no interest in common with farmers. If any class of people would be cared for they must care for themselves and not look to or depend upon men of other pursuits to frame and enact laws to guard their interests. If they do they are sure to get just what we now have, that is, capital will be enthroned in high places and will, as in every other age of the past, prove tyrannical and become alike insensible to destitution and tears, totally disregarding the principles of justice.

Then, brother farmers, begin at the top and elect an overwhelming majority of your law makers from your own ranks, beginning with the United States Senator, going all the way down to the members of your State Legislatures, and keep it up. The gross neglect upon our part to do this has in the last twenty five years increased the number of millionaires in the country from two to more than 7,000 and has placed in the possession of seventy American citizens (as stated upon good authority) \$1,413,000,000. Surely such a rapid concentration of capital, added to high rates of interest, high rates of transportation of the products of the farm and of what the farmers are compelled to have shipped to them, together with the other causes enumerated in this article, is what is making the farmers poor.

G. BOHRER.

Chase, Rice Co., Kas.

**What Ails the Farmers?**

EDITOR KANSAS FARMER:—By circumstances not prearranged I attended a meeting of the M. B. A. held in this county (Anderson) on the Fourth of July. The Declaration of Independence was read and speeches on the living issues of the day were delivered to a gathering of over 1,000 farmers and their families. To an observer it could be plainly seen that there is a feeling of dissatisfaction among the tillers of the soil against both of the old parties. It is very hard for the old parties to convince the farmers to go on in the old way when they (the farmers) cannot make ends meet by all the well-directed energy they have put forth in the past, have and must continue to mortgage their farms and chattels to get money to pay off the balance on the wrong side of the ledger, individually as well as nationally. The reports of R. G. Dun & Co.'s commercial agency, New York, calls our attention to the condition from a national standpoint. It says: "The monetary prospect is clouded by the exports of \$17,707,640 of gold and \$1,135,464 of silver from New York alone since June 1." What we as a people have to pay Europe on dividends and interest on investments and for money borrowed from them is very large, and it is clear to the mind of the writer that we cannot meet these obligations when due, if we continue to allow them indirectly or otherwise to legislate and fix prices for us. We may not have the landlord's agent here collecting the rent and sending it to England, but have we not the real estate agents here collecting the interest and dividends and sending it to Europe? Let me say right

here the farmers did not bring this upon themselves willingly.

Let me illustrate: What highways are to travel money in circulation is to business. Suppose you travel a certain road frequently to get from and to your home night and morning; this road is closed, you then have to go across or over some one's field; of course the owner demands some pay for the use of his field. Now has not both the old parties reduced the circulation until we have not money to conduct business? And have the farmers been forced to borrow on mortgages to meet the balance on the wrong side of the ledger caused by the stoppage of the roads—contraction of the currency—dictated to us by the Latin Union or single standard men in Europe and in New York city? The latter we may call truly a European city. England could not take this country by force of arms, but is she not taking it by legislation? You may have a deed to your farm and are obliged to give a mortgage on it for \$500 or upwards. Who owns your farm, you or the mortgagee? And fully one-half of such mortgagees live in Europe, thus increasing the balance against us. And yet certain papers of this State are trying to lead the people to a resubmission of the prohibitory law of Kansas, claiming that it has done this great evil. J. B.

**The Remedy.**

EDITOR KANSAS FARMER:—I have been anxiously looking over all the letters written by the would-be helpers of the farmer as well as the workings of the grange, farmers' alliance, farmers' institutes, and everything in any way looking forward to a way out of the deplorable condition to which the farmer has been driven, and in all of them I fail to see any sure relief. The fact is, the farmer has been run over so long that he has become intimidated and is afraid to speak out and demand what he knows will surely bring relief. I am going to be plain and speak out.

In the first place let me say I spent four years of the prime of my life living on hard tack and hard usage, and what did I accomplish? Why, I set at liberty a great herd of the most indolent beings in the world and paved the way to make millionaires and in that way hurled myself and the rising generation into the worst bondage the people of a free nation ever knew. I say, farmers and producers of these United States halt, and let us reconnoiter a little. Let us look at what we are doing. We go into our State Legislatures and we commence to enact laws saying we are going to help the farmers out first; we attack our railroads and common carriers; we set about to fix a limit on what they shall charge for the work they do for us. And how do we go about this? The first thing said is, this is the property of a millionaire and monopoly, consequently we must move carefully. Then the first thing is to see what the value of this railroad is, taking watered stocks and all; next we find out the entire running expenses, including high salaries of fancy officers and clerks; last the pittance paid to the laborers or the men who do the work and drudgery; then we ascertain the amount of taxes the road has to pay; all this found out, we next set aside a good decent per cent. for profit on the capital invested and we say, now in fixing rates you see we must not make them so low that the above figures can not at all times and under all circumstances be sustained. That is all right. Now I ask the same body of legislators to take up my side and fix rates for me. I don't ask anything out of reason, considering the above. First, the State officials and then the government officials make a business of getting up statistics for the entire United States. Now fix a fair price on my farm and work stock, then you can easily find out just what it has cost per bushel and per pound for me to raise everything; fix a fair price for my time, you need not fix it as high as the salary of the President of the United States—not but what I would a good deal rather do his work than mine at the same price, but I think his wages entirely too high for the labor employed. I will warrant you can find plenty of old farmers that will gladly take the job off his hands for \$1,000 per month. No, I say fix my salary at a fair price, set aside a decent per cent. of profit after cost of production, allow a decent per cent. on capital invested, and then fix the price per bushel and per pound so it will at all times and under all circumstances leave the above margin the same as you do for the railroads, and make it a misdemeanor and punishable by law for any one wanting to buy to offer less than the price fixed by the State legislators, or you can have the price fixed for the entire United States by Congress, then we farmers and producers will stop our complaining.

Now, brother farmers, I will say to you if

the above cannot be accomplished there is one more way out of this dilemma: We will not establish any secret order or society, but we will simply go on a strike; we will call a mass convention in each State and at that convention we will appoint delegates to meet immediately at a convention to be assembled for the delegates of the United States, and their business shall be to fix prices on all products of the entire United States. Let them then and there frame a contract and obligation that all may sign who who want to; have it stipulated in that agreement that all who sign will hold their products until the price fixed is realized, and that the penalty for violating the contract and agreement shall be death, to be, as it was in olden times, broke on the wheel. I believe I would as soon be broke on the wheel and have done with this as to be financially broke all the balance of my life, and I don't believe there is any farmer or producer but what is ready to help raise the price of his products to where it will give him a comfortable living, and I tell you if you will put your heads together and go on the strike you won't have to be out as long as the boys on the C., B. & Q. R. R. were to accomplish your ends. A. D. LEE.

**What Are We Going to Do About It?**

EDITOR KANSAS FARMER:—Your question is a timely one—"What are we going to do about it?" Well, not much of anything. Your suggestions are good as far as they go, but they do not go far enough. The trouble is not local, it is general. The farmer has supported the manufacturers and miners and railroad companies so long that he is getting about tired of it. The infant has become altogether too large to nurse. The infant industries of the past are the bragart loafers of the present, and instead of helping those who helped them in their days of weakness, they are still disposed to loaf and live at their expense.

In the East, where we have the full benefit of the "home market," farming lands have depreciated in value full one-third within a short time, while town lots have increased at about the same ratio. The farms of New England are growing up with cedars and pines or passing into the hands of capitalists to be rented to the pauper peasants of Europe, while these same capitalists are gradually getting control of the Western farm lands in a less despot but fully as effective way by means of mortgages. If the American farmer would not be lowered to the level of the peasantry of Europe he must assert himself at once. We must have a campaign for farmers' rights, and the sooner it is begun the better.

Pearsalls, N. Y. J. H. GRIFFITH.

**Protection Benefits Farmers--A Reply.**

EDITOR KANSAS FARMER:—In your issue of July 3, Mr. Thorp, of Hutchinson, criticizes my communication of a few weeks ago touching the tariff question. He says that the tariff benefits the farmer by bringing the producer and the consumer closer together. Let me ask Mr. Thorp what difference does it make to the farmer whether his surplus is consumed here or in China? Is it not a fact that as soon as his surplus crop is sold to some merchant or trader it passes from his hands and the farmer has no more to do with it and that he does not care who then uses it? What the farmer is after is the profit. He says take 1,000,000 working people from the farm and place them in the workshop and you see we have 1,000,000 less producers and 1,000,000 more consumers. How he arrives at such a conclusion to me is not clear. For did not these same persons consume as much or more of farm produce when they were living on the farm than they do now? Again, the throwing of these same 1,000,000 persons on the labor market, for they must have employment to live, will undoubtedly cause a fall of wages. And while many of them would produce other than agricultural articles, their consumption of the articles which they will produce will remain the same. If this be protection, then it is to a certain degree responsible for the stagnation in business that exists from time to time, as it is the cause of our producing more than we consume at one time. It is not overproduction, for we could use more than we do now, but because of our inability to pay for it. But if there be overproduction, if we have more than we can consume, why so much poverty? Why its prevalence, and why is it in our big cities that hundreds of persons are begging for bread? I should like Mr. Thorp to explain this and what I said about the subject a few weeks ago. At present the farmers of this country are competing with the cheapest labor in the world. It is not alone the labor of free trade England, but the protected labor of Germany, France,

Italy, Austria, Spain, Russia and so on that is from two to five times lower than England. Why do people of different nations trade? For the same reason that people of the same nation do—because they find it profitable. In the United States we find for the people of the different States it is profitable to have free trade among them, and why not nations, for a State is but a nation on a smaller scale; and a theory that will apply to a nation must apply with equal force to a State or it is no good. The statements about the payment of foreign labor and for steel rails are but forms of the delusion that to export is more profitable than to import.

But to come to the point: If foreign nations can produce articles cheaper than we can and are willing to sell them to us for less than we are paying now for the same articles, would we not be gainers and not losers by the transaction? Also, farmers do not build railroads, they only use them to ride upon, so their price does not materially affect them. Trade is not invasion; it does not involve aggression on one side and resistance on the other, but mutual consent and gratification. It matters not how much foreign nations may try to force their products upon the people of this country, unless there is a demand for their products they will never land on our shores. Thus we perceive that protection professes to protect or defend the people of a country from doing what they really want to do themselves.

Mr. Thorp again says that if I would come down to Hutchinson I could get all the salt I wanted at from 12 to 15 cents per hundred-weight. Wou't you ship me a barrel at that price when I want it? The very same salt costs here from 50 to 60 cents per hundred weight. What becomes of the wonderful difference in the prices? It would pay you to go into the shipping business. You would soon make a fortune at these prices. The monopolies and monied men have the farmers at their mercy, you say. And why are the farmers at their mercy? Because they do not vote for a party that will relieve them. The average tariff rate from 1821 to 1861 was about 30 per cent.; from 1861 to the present time about 43 per cent. Mr. Thorp says he has worked for 50 cents a day under Democratic administration and free trade. Why, I know lots of people who don't get that now; but when was it and what were you doing? About free trade, I challenge Mr. Thorp to prove that free trade has ever existed in this country since the levying of our first tariff, which went into effect on July 4, 1789. Mr. Thorp, if he worked under free trade in this country, must have been born before the adoption of the Constitution. I am no Democrat, and it will be several years until I am a voter, but what I want to see in this country is free trade and free production. J. E. BREWER.

Osage City, Kas.

Ensilage.

It is beyond question certain that among the new systems introduced for use upon the farm in these later days, ensilage has more than any other proved itself to be eminently practical and economical. So satisfactory is its use and so rapid its growth everywhere, and in the United States in particular, that the practical and intelligent farmer is interested in everything appertaining thereto. To preserve ensilage well, a good cutter is indispensable. The illustration on first page represents one of the celebrated Ross Cutters and Carriers, a favorite size, No. 14 A. This Cutter is one of a number of sizes built expressly for and particularly adapted to ensilage, and cuts equally well corn, clover, rye, Hungarian grass, millet, pea vines, sorghum, and other grasses, and into any length to suit the material. These machines are particularly strong, well made and very durable, simple and not liable to get out of order, and have exceptionally strong points. Among them is the safety fly-wheel, securing freedom to the machine and safety to the operator, easily kept in order and entirely reliable. The rocking self-feeding rollers are adapted to feed every kind of material, entirely overcoming any clogging and greatly facilitating rapid feeding. The rollers open parallel or obliquely, without strain on the gearing, and preventing the squeezing out of the juice from ensilage corn, an advantage not secured by any other method. The knives make an upward cut, the position of the cutting plate thus being above,—the knives will do more work without re-grinding,—as spaces above and behind the rollers are thus provided for the discharge of the dirt, grit, etc., which escapes the knives. By the upward cut the edges of the knives and the cutting plate are both in full view, greatly facilitating the adjustment of the knives when re-sharpened. The knife shaft also

rests naturally downward in its bearings, preventing all jarring, loosening of bolts and consequent breakage. All power machines are provided with heavy shafts, with three babbitted bearings instead of two as upon other machines, which prevents the knife from springing away from the cutting plate. The feed gearing in this machine is very simple, having very few parts to wear or get out of order, and it is so designed as to secure a large saving in power; securing positive action to the rollers and a heavier feed, as well as a higher speed to the knife cylinder, increasing the capacity without requiring additional power. The carrier is an important feature, being very solidly built and having babbitted bearings upon all shafts, and a device for taking up the slack simultaneously on both sides of the endless chain. By a peculiar arrangement, no part of the weight of the carrier rests upon the shafts or bearings, a patent device found on no other machine, saving 50 per cent. in friction and power. Carriers can be run in any direction and made of any length. The cutter represented has four fourteen-inch knives and will easily cut more than eight tons of ensilage per hour.

Messrs. E. W. Ross & Co., of Springfield, Ohio, who make these cutters, present a very extensive line of machines for agricultural purposes, ranging in price from \$6 to \$300, among them the largest machines in the world. Business was established in 1851, and the first cutter and first carrier used for ensilage in this country were manufactured by them. Messrs. Ross & Co. also publish a very complete work on the subject of ensilage and silos which they will send free to all interested parties.

Weather-Drop Bulletin

Of the Kansas weather service in co-operation with the United States Signal Service, for the week ending Saturday, July 20, 1889.

Precipitation.—The rainfall this week has been above the normal in the northern and southern counties, but below in the central counties west of Osage and Coffey, and in the southeastern counties. The heaviest rainfall reported was five inches in Pottawatomie, followed by two and a half in Sumner, two and a quarter in Rawlins, two and upwards in Grant, Riley and Cowley. The deficiency in the central counties of the western division continues and has extended into the west-central counties of the middle division.

Temperature and Sunshine.—The temperature has ranged from about normal in the eastern counties to considerable of an excess in the western, reaching 104 deg. in Stanton, 107 deg. in Haskell, 101 deg. in Cowley, 99 deg. in Coffey, 103 deg. in Edwards, 113 deg. in Gove, and 114 deg. in Trego. There has been a deficiency in sunshine in Ford, Comanche, Pottawatomie and Nemaha, but over the State generally there has been an excess.

Results.—The effect of the weather conditions has been to bring the corn, hay and potato crops well forward this week in the eastern and middle divisions, and the northern counties of the western. The hot winds of the 16th, 17th and 18th injured the corn and cane crops in the southwestern and western counties, but did not affect the young millet, nor the pumpkin, squash or melon vines. The rain of the 18th will revive the cane and it is believed the corn also, but further north, in Scott, Lane, Ness, Trego, Gove and Logan, more rain is needed. Wheat and oat threshing is in general progress over the State. Army worms are bad in Stanton and Grant, while chinch bugs are at work in Coffey and Woodson.

T. B. JENNINGS, Signal Corps, Ass't Director.

Topeka Weather Report.

Table with columns: Date, Thermometer (Max, Min), Rainfall. Data for July 14-20, 1889.

Washburn college, Topeka, Kas., admits both sexes. Facilities excellent; expenses reasonable.

NEW ADVERTISEMENTS.

- List of advertisements including: Deeded Land, Nebraska Farms, Cash and notes for land, Breeder's card, Stallions for sale, Buckeye Grain Drill, Fruit Evaporators, Stray rule, Harvest Excursions, Agents Wanted, Cotswold sheep, Well Machinery, Poland-Chinas.

Don't pasture meadows close in dry weather.

Book Notices.

CENTURY.—The forthcoming (August) number of the Century will contain a chapter on "Lincoln and the Churches" in the Lincoln History, by Messrs. Hay and Nicolay.

THE FAMILY HORSE.—A useful guide for the lover of that faithful servant, the family horse. We called attention to it so long ago. Published by Orange Judd Company, 751 Broadway, New York.

EDWARD'S WRITINGS.—A book containing the writings, chiefly editorials, of Major John A. Edwards. Major Edwards died some months ago, and this book is being published solely for the benefit of his widow. Price \$2. Address: Wiley O. Cox, President Kansas City State Bank, Kansas City, Mo.

HARPER'S MAGAZINE.—George William Curtis, in the "Editor's Easy Chair" of Harper's Magazine for August, will consider the words that rumor has put into the mouth of President Harrison, that his rule of act in was to please himself. Mr. Curtis maintains that, understood in its true spirit, this remark contains the highest rule of conduct.

AGRICULTURAL REPORT.—The report of the National Department of Agriculture for 1888 is out. There are 702 pages of matter, useful in every department of Agriculture. It is made up of the reports of the sub-divisions of the department, as entomology, animal industry, chemistry, botany, vegetable pathology, statistics or nithology, forestry, etc. Ask your member of Congress to get one for you.

Kansas Fairs for 1889.

- List of Kansas State Fair dates: Topeka, Sept 16-21; Anderson county, Garnett, Aug 27-30; Atchison District, Atchison, Sept 10-16; Barber county, Kiowa, Oct 15-17; Brown county, Cottonwood Falls, Sept 8-7; Chase county, Hays, Sept 15-17; Cheyenne county, St. Francis, Sept 25-28; Clay county, Clay Center, Oct 1-4; Coffey county, Burlington, Sept 9-13; Crawford county, Girard, Sept 24-27; Ellis county, Hays City, Sept 10-13; Ford county, Ford, Sept 18-20; Franklin county, Ottawa, Sept 18-20; Graham county, Hill City, Sept 2-7; Greeley county, Horace, Sept 24-26; Harvey county, Newton, Sept 10-13; Jefferson county, Okalosa, Sept 10-13; Jewell county, Mankato, Sept 10-13; Lincoln county, Lincoln, Sept 25-27; LaCygne District, LaCygne, Sept 24-27; Linn county, Mound City, Sept 16-20; Linn county, Pleasanton, Sept 10-13; Marion county, Marion, Oct 2-4; Morris county, Council Grove, Sept 23-26; Mitchell county, Cawker City, Sept 21-27; Nemaha county, Seneca, Sept 17-20; Neosho county, Erie, Oct 1-3; Osage county, Burlingame, Sept 10-13; Ottawa county, Minneapolis, Oct 9-11; Osborne county, Osborne, Sept 17-20; Plainville fair, Plainville, Sept 24-27; Phillips county, Phillipsburg, Sept 17-20; Rawlins county, Atwood, Oct 1-3; Reno county, Hays, Sept 11-20; Rush county, LaCrosse, Sept 18-20; Saline county, Salina, Sept 24-27; Sheridan county, Hoxie, Sept 26-27; Sherman county, Goodland, Sept 10-13; Smith county, Smith Center, Sept 18-21; Sumner county, Wellington, Aug 27-30; Woodson county, Neosho Falls, Aug 20-23.

Harvest Excursions--Low Rates.

The SANTA FE ROUTE will sell, on August 6 and 20, September 10 and 24, and October 8, 1889, round-trip excursion tickets at greatly reduced rates—about one fare for the round trip, from all points in Kansas east of a line drawn through Albert station (Barton county), Larned (Pawnee county), Maoksville (Stafford county) and Springvale (Pratt county), to all points west and to all points in the Indian Territory, Oklahoma, Texas, Panhandle of Texas, Colorado, New Mexico, Utah, Wyoming, Idaho and Montana. Tickets are good for thirty days from date of sale, with stopovers allowed at pleasure on return trip. Parties desiring to make a thirty days' trip to any of the western mountain resorts, including Las Vegas Hot Springs, Colorado Springs, Cascade Canon, Manitou, Green Mountain Falls, etc., can save money by taking advantage of the low rates on the Harvest Excursion dates. For ticket rates and other information, call on any agent of the A. T. & S. F. R. R., or address GEO. T. NICHOLSON, G. P. & T. A., A. T. & S. F. R. R., Topeka, Kas.

To prevent scours in calves, the Holstein Breeder recommends the use of starch. When the calf is dropped let it suck a small amount of its dam's milk, then take it from the cow and put it in a clean, dry, warm pen, well littered with straw. Prepare starch precisely the same as for starching clothes. When the calf is from six to eight hours old, give one-half pint of the starch, repeat every six hours until the calf is three days old, always to be given warm, from a bottle with a large opening. Usually after the calf is a day or so old, it will take the starch from a pail the same, as if it were milk. After the calf is three days old, if no signs of the scours are seen, add to the starch a small amount of its dam's milk, say one-half pint at first. Gradually increase both milk and starch until the calf is a week or ten days old; if any signs of scours are seen lessen the milk.

It is poor economy to let tools lie about the farm or the barn when they are not needed. Every thing of the kind ought to be cleaned and put under cover where it can be kept away from storms and rain until needed again.

TO MONTANA, OREGON AND WASHINGTON.

If you are going West, bear in mind the following facts: The Northern Pacific railroad owns and operates 987 miles, or 57 per cent. of the entire railroad mileage of Montana; spans the Territory with its main line from east to west; is the short line to Helena; the only Pullman and dining car line to Butte, and is the only line that reaches Miles City, Billings, Bozeman, Missoula, the Yellowstone National Park and, in fact, nine-tenths of the cities and points of interest in the Territory.

The Northern Pacific owns and operates 621 miles, or 521 miles, or 56 per cent. of the railroad mileage of Washington. Its main line extending from the Idaho line via Spokane Falls, Cheney, Sprague, Yakima and Ellensburg, through the center of the Territory to Tacoma and Seattle, and from Tacoma to Portland. No other transcontinental through rail line reaches any portion of Washington Territory. Ten days stop over privileges are given on Northern Pacific second-class tickets at Spokane Falls and all points west, thus affording intending settlers an excellent opportunity to see the entire Territory without incurring the expense of paying local fares from point to point.

The Northern Pacific is the shortest route from St. Paul to Tacoma by 207 miles; to Seattle by 177 miles, and to Portland by 244 miles—time correspondingly shorter, varying from one to two days, according to destination. No other line from St. Paul or Minneapolis runs through passenger cars of any kind into Idaho, Oregon or Washington.

In addition to being the only rail line to Spokane Falls, Tacoma and Seattle, the Northern Pacific reaches all the principal points in northern Minnesota and Dakota, Montana, Idaho, Oregon and Washington. Bear in mind that the Northern Pacific and Astoria line is the famous scenic route to all points in California.

Send for illustrated pamphlets, maps and books giving you valuable information in reference to the country traversed by this great line from St. Paul, Minneapolis, Duluth and Ashland to Portland, Oregon, and Tacoma and Seattle, Washington Territory, and enclose stamps for the new 1889 Rand-McNally County Map of Washington Territory, printed in colors. Address your nearest ticket agent, or CHAS. S. FEE, General Passenger and Ticket Agent, St. Paul, Minn.

A Summer Vacation.

At this time of year nearly every one begins to think of a summer vacation, or an outing of some kind for a little recreation. For those who desire to visit the summer resorts of the East—Niagara Falls, the White Mountains, Old Point Comfort, and numbers of others, there is no line which offers better facilities or lower rates than the Burlington Route. If the trip is to be by way of Chicago, the Hannibal & St. Joseph's fast vestibule train, "Elli," has no peer; leaving Kansas City in the evening, the traveler takes supper and breakfast on the dining car, arriving in Chicago in time for all connections east. If he desires to go by the way of St. Louis, he leaves Kansas City after supper and arrives in St. Louis for an early breakfast and eastern connections. Both of these trains are luxurious in every respect and equipped with Pullman Palace sleeping cars and free reclining chair cars.

For a short trip there is probably no more delightful summer resort than Spirit Lake, Iowa, or one of the other countless lakes in northern Iowa and Minnesota. Here again the traveler finds he cannot do better than take the morning train of the K. C. St. J. & C.B. R. R., leaving Kansas City at 11:15 a. m. and arriving in St. Paul and Minneapolis next morning for breakfast. From these points he can make direct connections for summer resorts in all directions. This train has one of Pullman's finest buffet sleeping cars through between Kansas City and St. Paul. This also is the train to take for Spirit Lake, but one change being made, and that early in the evening into a through sleeper to the Lake arriving at destination at 7:15 in the morning. The above trains run daily.

Write for all information, tourist circulars etc., to H. C. Orr, General Southwestern Passenger Agent, 900 Main street, Kansas City, Mo. A. C. DAWES, General Passenger and Ticket Agent, St. JOSEPH, Mo.

Patents.

Higdon & Higdon, Patent Lawyers, solicitors for American and foreign patents, office rooms 55 and 56 Hall Building, Kansas City, Mo., and room 29 St. Cloud Building, opposite United States Patent Office, Washington, D. C., report the following inventions patented for week ending July 16, 1889. [By applying to them at either office a printed copy of any patent here named can be obtained for 25 cents. Send for book of instructions, free of charge].

MISSOURI.

- Combined seeder and harrow—John B. Coon, Cold Spring. Fireplace—James H. Dozier, St. Louis. Gate—Charles S. Hudler, Hermitage. Hog-trap—Solomon Loffer, Maitland. Paper-holder and cutter with printing attachment—McRae & Baker, Kansas City. Car coupling—Edward F. Miller, Avenue City. Apparatus for scrubbing and washing gear—Kerr M. Mitchell, St. Joseph. Separator—Lansing A. Palmer, Kansas City. Steam boiler—Philip Rohan, St. Louis.

KANSAS.

- Roofing sheet—Charles M. Garrison, Wichita. Wood embossing, filling and packing out machine—William W. Kruttsch, Fort Scott. Shifting piano action—Charles M. Richards, Fort Scott.

NEBRASKA.

- Balanced valve—Warren T. Reaser, Fairmont. Camera attachment—O. L. Munger, Gresham.

In Summer Days

You can reach the cool and charming resorts of the Northwest, in the new and elegant vestibuled, Family Compartment Sleeping Cars recently placed in service on the Chicago, St. Paul & Kansas City railway. Round trip tickets at reduced rates. Time two and one-half hours quicker from St. Joseph to St. Paul and Minneapolis than any other line. For further information, address GEO. C. KNOCKE, Passenger Agent, 122 North Third street, St. Joseph, Mo.

## The Home Circle.

### To Correspondents.

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

### Life on the Farm.

At the foot of the hill the milk-house stands,  
Where the Balm of Gilead spreads his hands,  
And the willow trails at each pendant tip,  
The lazy lash of a golden whip,  
And an ice-cold spring with a tinkling sound  
Makes a bright green edge for the dark green ground.

Cool as a cave is the air within,  
Brave are the shelves with the burnished tin  
Of the curving shores, and the seas of white  
That turn to gold in a single night,  
As if the disc of a winter moon  
Should take the hint of a new doubloon!

Burned to a coal is the amber day,  
Noon's splendid fire has faded away,  
And, lodged on the edge of a world grass-grown,  
Like a great live ember glows the sun;

When it falls behind the crimson bars  
Look out for the sparks of the early stars.

With the clang of her bell a motherly brown—  
No trace of her lineage handed down—  
Is leading the long deliberate line  
Of the Devon red and the Durhams fine;  
"Co-boss!" "Co-boss!" and the caravan  
With a dowager swing comes down the lane,  
And lowing along from the clover bed,  
Troops over the bars with a lumbering tread.

Under the lee of the patient beasts,  
On their tripod stools like Pythian priests  
The tow-clad boys and the liny girls  
Make the cows "give down" in milky swirls.  
There's a stormy time in the drifted pails,  
There's a seafoam swath in the driving gales,  
Then girls and boys with whistle and song,  
Two pails apiece, meander along,  
The winding path in the golden gloom,  
And "set" the milk in the twilight room.  
—Selected.

To threats the stubborn sinner oft is hard  
Wrapp'd in his crimes, against the storm pre-  
pared.

But when the milder beams of mercy play,  
He melts, and throws his cumbrous cloak  
away.  
—Dryden.

### PROHIBITION VS RESUBMISSION.

I am surprised, after our State has won such a glorious victory as banishing the traffic of intoxicating liquors, that our sister States would intimate the absurd idea—resubmission. Why did we enforce prohibition? Because we realized the beverage totally demoralizing, ruining happy homes, blasting noble lives, filling our prisons and asylums. Now do we purpose to apologize for this noble movement by inviting the saloonists and brewers to return to our fair State, encouraging the traffic that destroys peace and happiness, telling them we regret that we discouraged them and caused financial embarrassment? No, never! This is a prohibition State and intends remaining so, unless some of the depraved population of our neighbor States design to immigrate in view of swelling the majority in favor of resubmission, or if it be possible that some of our voters reveal themselves traitors by casting their votes with the would-be minority. After eight years trial of prohibition, we find it a grand success, the law being highly respected or rigidly enforced, there being not an open, public drinking saloon in our State. We do not purpose to acquiesce. In conversing recently with an enthusiastic prohibitionist (?) he said: "I am a prohibitionist; but there is so much money going out of the State." I for one am in favor of letting it go. We, as a civilized people, do not care to barter human lives for gold. I do not affirm that the saloonists are wholly to blame for this evil, for if the public would not encourage it, they would willingly seek other employment. Yes, there is money in it, but nothing else. Even the saloonist, hard-hearted though you call him, cannot fail to see the effect of his enticing beverage in the bloated race and reeling gait of his customer, and no doubt regrets the greedy appetite, but he scarcely has time to reflect ere another depraved individual calls for a glass. Is it any wonder we are in favor of prohibition? That last customer, probably, was once a loving son, a devoted husband, an affectionate father, and a lover of his home, now preferring the dramshop. O, you say, high license would prevent such wretched cases. How many of the "sterner sex," accustomed to refreshing (?) themselves, would be willing to have their wives and daughters slyly going behind the screen and enjoying a favored glass? (For some mysterious reason our American people prefer a screen—modesty, no doubt.) I assert, if it is right for one to drink, it is right for all. If liquor is invigorating for men, it is for boys. If elevating for gentlemen, it is for ladies. If demoralizing to the young, it is to the old. Who is thoughtless enough of the evils of intoxicants to the young or the dissipated to be in favor of resubmission. I advise prohibitionists to stand firm to their principles and with never-ceasing enthu-

siasm, to encourage the weak, to abolish the topic—resubmission. SUNFLOWER. Wakarusa, Kas.

There will be no resubmission in Kansas. Like coyotes, a few resubmissionists make a great deal of noise, but they are not dangerous. Our young boys and girls do not know what a dramshop is, and if we hold on to prohibition, the next generation will know nothing of the saloon except what they see in other States, and that will strengthen their opposition to it.—EDITOR.

### Sunshine.

I wish we had more "Sunflowers" in the Home Circle. Come often, "Sunflower," and wake us up. I had concluded to rest this afternoon, although the fruit was in the cellar to be canned—but there is always something to do—and I picked up the KANSAS FARMER and commenced to read the Home Circle department. The first words I read were, "Why not rest?" The topic suited me, so on I went till I had finished the good article.

Laugh while we can and be merry as the merriest bird. Open wide the doors and let the bright sunshine and fresh air come in—yes, and the windows, too, this warm weather. Throw back the blinds, no difference if the sun does fade your carpet and furniture. It is good health we are seeking, or should seek. Don't let the members of your family cause you to feel worried; just take a good old-fashioned rest on the blue grass, or in the hammock, or anywhere that you feel the best. Take three hours of solid comfort, and if any one steps into your sunny retreat and begins talking about this "not paying" and that "not paying" in their business, just pass it by without worrying, and tell them not to mention the briars now because you are dwelling among the roses and are listening to the joyful notes of a bird resting itself in the apple tree. They will soon realize that you don't enjoy their "thorn talk" and they'll leave you to while away the hours in the way that suits you best. Don't let the clouds gather round during that rest, but talk to the sunshine all you please and coax it to stay with you; it is good company. Such air is invigorating and will surely cause you to wear a bright smile and be contented. Greet a little child in a cheerful way and his eyes will sparkle and his whole face beam with pleasure. Meet him with a gruff "good morning," and there will be no smiling face and the little fellow will wander on his way and probably think, "What ails that person to-day?" How happy are the days spent with cheerful people. People full of sunshine, whose hearts are big, whose thoughts are good, and whose smiles make your step more elastic and your pathway through life ever blooming with roses. "Laugh and the world laughs with you, weep and you weep alone." All the Home Circle readers take a good long, loud laugh—often, too,—and see if the household machinery does not run smoother. You know these wheels have to be oiled often or they will squeak, and when a wheel is squeaking, especially in the house, it should be attended to at once—by admitting a little more sunshine. BELLE L. SPROUL.

### Letter from "Englishwoman."

I should like to hear the experience of some who are successful in raising ducks—the best way of treating before and after hatching and most suitable food. We tried to raise ten pigs by hand in February and lost six in the attempt; they seemed to be attacked with weakness in the hind legs. The complaint would come on quite suddenly, and in an hour or so they would die. I should like to know a good way to treat tiny pigs—how often to feed, whether to give undiluted milk, etc. Will some one state the name of the best variety of red raspberries—not the ordinary black ones? I think, with "Sunflower," that we ought to take time for rest and recreation, but it is very hard to snatch the time when "there is so much to do." An old friend of my mother's, writing to me last year, said—"Anticpate heaven and its joys, it will so smooth the path of life." I believe it does, and also Miss Havergal's happy thought of "the grand leisure to be enjoyed in-eternity." Yet I think we mothers are willing to wait for the joys, and leisure, too, if only we can be spared to see our darlings happily settled in some honorable calling in life. We are very responsible persons, I think. To me it seems a good plan to have a few verses read by each child every morning and family prayer at least once a day. We cannot expect the future rest unless we prepare for it, and how can we better prepare for it than by studying the will of Him who provides it—even the law of God as set forth in the Holy Bible? ENGLISHWOMAN.

### The Care of House Plants During Summer.

House plants should not be put out-of-doors at the North before the first of June. Cool nights and late frosts are of frequent occurrence through the month of May, north of New York city, and whoever puts her plants out very early in the season, as many do, may wake up some morning and find them nipped.

I am often asked what it is best to do with house plants in the summer—whether to keep them on the veranda, to sink the pots in the ground, or to turn the plants out of their pots. I would always advise the amateur to keep her plants in their pots, and to put the plants in some sheltered place, rather than in the full blaze of the sun. It is true that they will require more attention if kept in this way than they would if planted out. But the advantages are, that you have them where they will require more or less care, and, knowing this, you will not be likely to neglect them, and it never pays to neglect a plant. Most persons seem to think that it doesn't matter very much how plants are summered. They have an idea that about all that is necessary is to keep them alive until fall. Then they will take them in hand and make satisfactory plants of them for winter use. That is all wrong. The summer is the time in which to make preparations for the winter campaign. If you want fine plants in winter you must make them fine plants before winter comes. If you neglect them now you will find that it is too late to get them in good condition for winter work in fall. It will take the greater share of winter to get a plant, neglected during the summer, in good condition. But if your plants begin the winter in strong, vigorous condition you may reasonably expect a great deal from them.

Plants intended for winter use must receive quite as much care now as later in the season. More care of a certain kind, in fact. They must be encouraged to make satisfactory growth. They must be pinched in to produce branches, and make them compact and symmetrical. You are laying the foundation for what you hope to realize later. Your aim should always be to have them in the best possible condition at all times, and your summer's work must be done with reference to the future. Never expect much from plants in winter which were "poor specimens" in fall.

If plants are plunged, which is the term gardeners use when they mean that the pots containing the plants are sunk in the earth up to their rims, they are pretty sure to suffer. The soil about the roots will become much drier than that about the pot, for, though most pots are porous, they do not admit moisture in sufficient quantity to keep the requirements of the young and delicate roots. This difficulty can be overcome by daily applications of water, but the fact is that plunged plants are almost always neglected because the soil about them has the appearance of being moist, and the fact of lack of moisture inside the pot is lost sight of or not well understood. They are likely to be injured by winds and heavy storms because they are not sufficiently sheltered. If care is not taken to put a layer of coal or wood ashes under the pots,—and almost invariably this is not done, I find,—worms will effect an entrance through the hole in the bottom. And in nine cases out of ten you will find that plants which have been plunged have sent roots down into the soil through this hole, and when you come to take them up in the fall these roots will have to be broken off to the great injury of the plant.

In turning plants out of their pots and planting them in the open ground the owner avoids the care she would have to give them if kept in pots, and she will congratulate herself on the vigorous growth they make. But when cold weather approaches and the plants have to be lifted and potted a "change will come o'er the spirit of her dream." She will find, then, that the roots have spread far and wide about the plants. The little plant from a six inch pot will have made such vigorous increase of roots that a half-bushel measure would not contain them all, and of course it is out of the question to give them such large pots as seem necessary. In trying to reduce the earth about them to fit the pots in which she wishes to put them she will find that most of the large roots will have to be cut away, and all the others disturbed more or less. In cutting away these strong feeding roots, and the exposure of the others, the plant receives a violent shock from which it will take it all winter to recover. Of course, after cutting off a large share of the roots, the top must be cut back correspondingly or the plant would be pretty sure to die, for there will not be sufficient root action to support all the old branches. If cut back, new roots will have to be

formed before growth begins. The plant must become re-established first. You will readily see, therefore, that when this plan is pursued, you have, in fall, at the very time when the plant should be at its best, strong, vigorous, and able to stand the change from out to in-door conditions, a plant which is just getting, or trying to get, a fresh start; a plant that has received a great shock and is thereby greatly weakened. Instead of being ready for work it must form new roots, and get a fresh hold on life. And the change from out-door to in-door will be so decided that it will be still further weakened by it. Out-of-doors, in fresh air, and under natural conditions, it might recover much sooner. But the close air of living rooms, the too great heat, and the dry atmosphere all combine to enervate it. Of course, if plants could be taken up without disturbing the roots, this method of summering them would be a good one, because they grow so much better and are more robustly healthy than when kept in pots. But as it is impossible to do this I never advise any one to turn their plants out of their pots, and I think any one who has tried the various methods of keeping house plants over the summer will agree with me that this is not the best way.

I would advise removing your plants to a veranda with an eastern or northern exposure. If you have only a southern or western one, I would advise a screen of lath, lattice or vines. The sun will burn many tender plants left exposed to it from noon to 3 o'clock. An eastern or northern exposure is preferable because no screen will be required, and there will therefore be a freer circulation of air. The heat will also be less intense.

Water daily, and give it thoroughly to all plants which you want to grow vigorously. If you have some that you want to rest in summer, give less,—just enough to keep the earth from getting dry. Go over your plants at least once a week and whenever you see a branch getting the start of the others nip off the end of it. If a plant seems inclined to grow up tall and without branches, cut the top off, and persist in doing this till branches start. Perseverance will work wonders with your plants. You can make almost any plant bushy and compact by pinching in its branches and keeping at it till it assumes the shape you want it to have. Stir the soil in the pots at least once a week.

If a plant is given fresh soil in spring, and grows well through the summer, do not give it any fertilizer. You do not want to force it, simply to keep it growing healthily.

A slow, sturdy growth is better for a plant in summer, which you are preparing for winter work, than a rapid one.—Ladies' Home Journal.

### Rules for Using Books.

Never hold a book near a fire.  
Never drop a book upon the floor.  
Never turn leaves with the thumb.  
Never lean or rest upon an open book.  
Never turn down the corners of leaves.  
Never touch a book with damp or soiled hands.

Always keep your place with a thin book-mark.

Always turn leaves from the top with the middle or fore finger.

Never open a book farther than to bring both sides of the cover into the same plane.

Always open a large book from the middle, and never from the ends or cover.

Never cut the leaves of a book or magazine with a sharp knife, as the edge is sure to run into the print, nor with the finger, but with a paper-cutter or ordinary table knife.

Never hold a small book with the thumb pressed into the binding at the lower back, but hold it with the thumb and little finger upon the leaves and three fingers upon the back.

Did you read what was said in this paper last week by the business manager of the *Herald of Faith*, St. Louis, about Shallenberger's Antidote for Malaria? No one can have Malaria in the system and enjoy one hour of perfect health. A few doses of the Antidote will cure you immediately. Sold by druggists, or sent by mail for one dollar, by Dr. A. T. Shallenberger, Rochester, Penna.

### The Cool Resorts of the Northwest

Are most luxuriously and comfortably reached in the celebrated Vestibuled Compartment Cars recently introduced on the popular Chicago, St. Paul & Kansas City railway. The press and public are agreed that these Compartment Sleeping Cars are unequalled by any sleeping cars in the world for luxury, comfort, privacy and perfect ventilation. The berths extend crosswise instead of lengthwise of the car, thereby avoiding the oscillatory and uncomfortable motion peculiar to the old-style sleeping car. One night's ride to or from St. Joseph, St. Paul and Minneapolis, or between any other points reached by this excellent railway, including Dubuque, Des Moines, and many other towns and cities in the States of Illinois, Iowa, Minnesota and Missouri, will convince any person of the superior merits of these cars. You can do a great deal worse, but you cannot do better than to travel over the Chicago, St. Paul & Kansas City railway.—Exchange.

## The Young Folks.

### Happy Orphans.

A hundred little chicks or more,  
Downy, soft and yellow,  
Were peeping out their discontent  
In voices far from mellow.  
I looked around in wonderment—  
No mothers were at hand  
To gather 'neath their outstretched wings  
The doleful little band.

And as I gazed a small, wee voice  
From one chick seemed to say,  
"Perhaps you think we like it,  
This fine, new-fangled way,  
But it's very disagreeable,  
For, strange as it may seem,  
We never had a mother—  
They hatched us out by steam.

"And they call us happy orphans  
When we are ready all to weep,  
For no answering cluck comes back to us,  
Though we peep and peep and peep.  
They say it's scientific,  
And I've no doubt it is true,  
But I would rather have a mother—  
Now, really, wouldn't you?"

—Harper's Young Folks.

- The longest day is in June, they say;  
The shortest in December,  
They did not come to me that way;  
The shortest I remember  
You came a day with me to stay,  
And filled my heart with laughter;  
The longest day (you were away)  
The very next day after.

—George Birdseye.

### ABYSES OF THE PACIFIC OCEAN.

The peculiarity of the Pacific ocean is that it can be divided into two distinct parts, the dividing line being the meridian of 150 deg. west. The eastern half, that which lavas our shores, is remarkable for the absence of islands and the uniform nature of its depth, for, with the exception of the narrow strip of shallow water surrounding the Aleutian Islands, and running along the American coast, the sounding line shows an average depth of from 2,000 to 3,000 fathoms, undiversified by any remarkable elevations or depressions. The only noteworthy exception to this great and equal depth is a great submarine plateau, which extends out from the Patagonian coast, and which rises to between 2,000 and 1,000 fathoms from the surface. This plateau is horn-shaped, and is evidently a connecting link between the South American continent and the Australian archipelago. The western half of the Pacific ocean is a complete contrast to the eastern. Archipelagos and scattered islands are exceedingly numerous, and the depth of the ocean is uniform, shallows occurring scattered over it at irregular intervals. Along the Asiatic coast and between the island groups there are a number of partially enclosed seas, and these are separated from the great ocean by submarine plateaus of sufficient extent and height to warrant the supposition that a moderate upheaval would extend the Asiatic continent as far south as Australia, transforming the seas into inland salt lakes. Considerations of the peculiar animal and vegetable life of New Zealand and Australia lend probability to the speculation that these islands were joined to the main continent of Asia at some remote period, and it is even possible to trace the submerged coast-line of the great continent which then existed. The same upheaval acting upon the plateau extending out from the Patagonian shore would almost make the Pacific a land-locked ocean, the entrance to it being between the point of the new land stretching out to 121 deg. east latitude and another headland formed by what is now Ducie island, lying in the same latitude, but about 10 deg. further north. Many of the islands of the various Pacific archipelagos rise from depths of about 3,000 fathoms, forming isolated mountains, springing from the bed of the ocean to a height of 18,000 feet, and several which do not rise to the surface have been detected. More usually a number of islands are bound together by submarine elevations, frequently within a few hundred fathoms of the surface and extending over wide areas. These are the great sierras of the sea.

As has been said, there runs along the American shore a narrow strip of shallow water, but the term shallow is only to be taken in its comparative sense. It is from fifty to 200 miles wide, the depth running from nothing to 1,000 fathoms. Outside this again is another strip of not quite so uniform a width, wherein the depth reached 2,000 fathoms, quite deep enough to drown a tall man. The uniform character of the sea's depth is quite marked along the Californian shore, but even here there are ups and downs, shallows and depths. The coast line has a strip of water as its immediate border, in which the depth keeps at about twelve fathoms along a ledge or plateau for a few miles out, and then drops sheer down for 500, 600 and 1,000 fathoms. This shore ledge is quite well defined and generally unbroken,

but in it there sometimes occurs a crevasse or valley, whose exploration is a matter of much curious interest. Directly off Point Hueneme, at the entrance to the Santa Barbara channel, there is found a remarkable example of one of these submarine valleys. Commencing with a depth of ten fathoms 400 yards from the beach, it increases to fifty fathoms in five-eighths of a mile and then drops suddenly to 113 fathoms, or 678 feet, in less than two miles. Its general direction is south and it is bounded all round by depths of from twelve to fifteen fathoms. These facts are taken from the observations and soundings of Prof. George Davidson.

Another remarkable example of the submarine valley has been discovered and to some extent traced out in Monterey bay by Commodore James Alden. The head of this valley is five-eighths of a mile south of the Salinas river, and the twenty-fathom line is only a quarter of a mile off the beach, the depth increasing to fifty fathoms in the next quarter of a mile. At this distance from shore the twenty-fathom line are three-eighths of a mile apart. The general direction of the valley for the next two miles is southeast, where there is a depth of 117 fathoms, the fifty-fathom lines running about five-eighths of a mile apart; thence the valley runs about west, reaching the depth of 170 fathoms in a mile and 240 fathoms in three and one-quarter miles, with forty-two fathoms less than a mile to the north. The soundings are not numerous enough to trace its outlines in deep water, but the indications are for ten miles of its length that it runs southwest, with no bottom at 315 fathoms. It would appear from this description that this valley is really an enormous canon that opens through the shore-line ledge clear out and down into the deep water of the 1,000 fathom belt.

Here again the terms deep and crevasse are to be taken in their comparative sense. These submarine valleys of the coast line ledge have their dimensions, it is true, but they sink into utter insignificance beside the abysses which mark the bed of the great ocean, abysses which seem to drop clear to Tophet or Davy Jones's locker. To the east of the Kurile Islands and Japan there lies a crescent-shaped space of deep water that really merits the term. It extends from 50 deg. north latitude to nearly 20 deg. north latitude, or for 1,800 miles, although it is of no great breadth. The average depth of this area is nearly 4,000 fathoms—that is, nearly 24,000 feet. This is deep enough in all conscience, but along its western margin, and lying like a ditch across the entrance to the Sea of Okhotsk, is an abyss where the United States ship Tuscara found depths of over 4,600 fathoms—that is, of over 27,600 feet, or a hole about deep enough to hold Mount Everest if turned upside down and placed within it.—San Francisco Chronicle.

### Some Superstitions About Precious Stones.

Agate quenches thirst, and if held in the mouth allays fever. It is supposed, at least in fable, to render the wearer invisible, and to turn the sword of foes against themselves. It is the emblem of health and long life, and is dedicated to June. In the zodiac it stands for Scorpio.

Amber is a cure for sore throat and all glandular swellings. It is said to be a concretion of birds' tears. The birds which wept amber were the sisters of Meleager, called Meleagrides, who never ceased weeping for their brother's death.

Amethyst banishes the desire for drink and promotes chastity. The Greeks thought it counteracted the effects of wine. The amethyst is an emblem of humility and sobriety. It is dedicated to February and Venus. In the zodiac it represents Sagittarius, in metallurgy copper, in Christian art it is given to St. Matthew, and in the Roman Catholic church it is set in the pastoral ring of bishops, whence it is called the "prelate's gem."

Cat's eye is considered by the Chinese as a charm against witchcraft, and to be the abode of some genii.

Coral is a talisman against enchantments, thunder, witchcraft, and other perils of flood and field. It was consecrated to Jupiter and Phœbus. Red coral worn about the person is considered a cure for indigestion.

Crystal induces visions, promotes sleep and insures good dreams. It is dedicated to the moon, and in metallurgy stands for silver.

Diamond produces somnambulism and promotes spiritual ecstasy. The diamond is an emblem of innocence, and is dedicated to April and the sun. In the zodiac it stands for Virgo, in metallurgy for gold, in Christian art invulnerable faith.

Emerald promotes friendship and constancy of mind. If a serpent fixes its eyes on an emerald it becomes blind. It is an

emblem of success in love, and is dedicated to May; in the zodiac it stands for Cancer, in metallurgy for iron, and in Christian art is given to St. John. It is dedicated to Mars. Garnet preserves health and joy. It is an emblem of constancy, and is dedicated to January. This was the carbuncle of the ancients.

Jacinth is also dedicated to January. Loadstone produces somnambulism, is dedicated to Mercury, and in metallurgy stands for quicksilver.

Moonstone has the virtue of making trees fruitful and of curing epilepsy. It contains in it an image of the moon, representing its increase and decrease every month.

Onyx contains in it an imprisoned devil, which wakes at sunset and causes terror to the wearer, disturbing sleep with ugly dreams. Cupid, with the sharp point of his arrows, cut the nails of Venus during sleep, and the parings, falling into the Indus, sank to the bottom and turned into onyxes. In the zodiac it stands for Aquarius; some say it is the emblem of August and conjugal love; in Christian art it symbolizes sincerity.

Opal is fatal to love and sows discord between the giver and receiver. Given as an engagement token it is sure to bring ill-luck. The opal is an emblem of hope, and is dedicated to October.

Ruby. The Burmese believe that the ruby ripens like fruit. They say that a ruby in its crude state is colorless, and, as it matures, changes first to yellow, then to green, then to blue, and lastly to a brilliant red, its highest state of perfection and ripeness. In the zodiac it stands for Aries. Some give it to December, and make it the emblem of brilliant success.

Sapphire produces somnambulism and impels the wearer to all good works. In the zodiac it signifies Leo, and in Christian art is dedicated to St. Andrew, emblematic of his heavenly faith and good hope. Some give this gem to April.

Topaz is favorable to hemorrhages, imparts strength and promotes digestion. It is an emblem of fidelity and is dedicated to November. In the zodiac it stands for Taurus, and in Christian art is given to St. James the Less.

Turquoise, given by loving hands, carries with it happiness and good fortune. Its color always pales when the well-being of the giver is in peril. It is an emblem of prosperity, and is dedicated to December. In the zodiac it stands for Saturn, and in metallurgy for lead.

A bouquet, composed of diamonds, loadstones and sapphires combined, renders a person almost invincible and wholly irresistible.

All precious stones are purified by honey. —Detroit Free Press.

### How Large Was Ancient Rome?

After carefully examining all the data we have, all the statements of the various ancient writers who allude to it, and all the facts which seem to bear on the question, I am convinced that in estimating the number at 4,000,000, I am rather understating than overstating it. It is much more probable that it was larger than that it was smaller. De Quincy also estimates the inhabitants of Rome at 4,000,000. I will only cite one fact, and then leave this question. The Circus Maximus was constructed to hold 250,000,

or, according to Victor, at a far more probably, 385,000 spectators. Take these smaller number, then, it would be 1 in 4 of all the inhabitants if there were 4,000,000. But as one-half the population was composed of slaves, who must be struck out of the spectators, when the circus was built there would be accommodation then for 1 in 8 of the total population, excluding slaves. Reducing again the number one-half by striking out the women, there would be room for 1 in 4. Again striking out the young children and the old men and the sick and impotent, you would have accommodation for nearly the whole population. Is it possible to believe that the Romans constructed a circus to hold the entire population of Rome capable of going to it?—for such must have been the case were there only 4,000,000 inhabitants. But suppose there were only 1,000,000 inhabitants, it is plain from the mere figures that it would never have been possible to half fill the circus.—Blackwood's Magazine.

**MUSIC-ART-ELOCUTION** and General Culture. Desirable Positions open to progressive students. All interested will receive valuable information free, by addressing E. TOURJEE, Boston, Mass.

### State Agricultural College

Free Tuition. Expenses Light. Endowment, \$500,000. Buildings, \$120,000. Grounds and Apparatus, \$100,000. 20 INSTRUCTORS. 500 STUDENTS. Farmers' sons and daughters received from Common Schools to full or partial course in Science and Industrial Arts. Send for Catalogue to MANHATTAN, KANSAS.

### Southwestern Business College

WICHITA, KAN. — WRITE FOR CATALOGUE. The only business college in Wichita. The largest institution of its kind west of Chicago. Nearly 800 students in attendance last year. Board \$1.90 per week. Write for circulars.

### Lawrence Business College

By attending the Lawrence Business College, a live, progressive, high-grade practical school for ambitious and industrious young men and women who wish to qualify thoroughly for the active duties of life. The oldest, largest and best equipped institution of its kind west of the Mississippi. Our large 64-page illustrated catalogue, finest published, will be sent free to any address. Be sure and write us before going elsewhere. E. L. McILROY, Pres't, Lawrence, Kas.

### WASHBURN COLLEGE.

TOPEKA, - - KANSAS.



FOR BOTH SEXES. Collegiate and Preparatory courses.—Classical, Scientific, Literary; also an English course, Vocal and Instrumental Music, Drawing and Painting, Oratory and Elocution. Fourteen instructors. Facilities excellent. Expenses reasonable. Address PETER MOVICAR, Pres.



### BETHANY COLLEGE.

Under care of the Protestant Episcopal Church. For GIRLS AND YOUNG LADIES, exclusively. Boarding and Day Pupils.

Twenty-six Officers and Teachers.

Faithful Maternal oversight for all entrusted to our care. ALL BRANCHES TAUGHT—Grammar and Collegiate, French, German, the Classics, Instrumental and Vocal Music, Elocution, Drawing, Painting. THE MUSIC DEPARTMENT—Employs ten teachers, and twenty-four pianos and three organs. In the ART DEPARTMENT, the Studio is well equipped with casts, models and copies. Send for Catalogue to T. C. VAIL, Bursar, or BISHOP T. H. VAIL, President, Topeka, Kansas.

### EMPORIA BUSINESS COLLEGE

—EMPORIA, KANSAS.—

PROF. O. W. MILLER, -- -- -- PRESIDENT.

**ASK THE KANSAS FARMER.**

ESTABLISHED IN 1863.

Published Every Wednesday by the  
**KANSAS FARMER COMPANY.**

OFFICE:  
KANSAS FARMER BUILDING,  
Corner Fifth and Jackson Sts.

**SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.**

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.  
Address **KANSAS FARMER CO., Topeka, Kas.**

**ADVERTISING RATES.**

Display advertising, 15 cents per line, agate, (fourteen lines to the inch).  
Special reading notices, 25 cents per line.  
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$1.00 per line for one year.  
Annual cards in the *Breeders' Directory*, consisting of four lines or less, for \$15.00 per year, including a copy of the *KANSAS FARMER* free.  
Electros must have metal base.  
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.  
To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.  
All advertising intended for the current week should reach this office not later than Monday.  
Every advertiser will receive a copy of the paper free during the publication of the advertisement.  
Address all orders  
**KANSAS FARMER CO., Topeka, Kas.**

Recent heavy rains have injured oats in some places.

Kansas State Fair at Topeka opens September 16th to 21st inclusive.

The officers of the State Fair expect a large attendance and extra good exhibits.

The *KANSAS FARMER* will be sent on trial thirteen weeks to new subscribers for 25 cents.

We have several communications—long ones, which will appear as soon as we can make room for them without crowding.

It is time that steps be taken by the President and Congress to establish free trade with the people of Canada and Mexico.

Keep a sharp look out for caterpillars on trees. Destroy them. Torches are good things to use when the nests are too high for hand work.

We are in receipt of catalogues of the State University, Agricultural college and Normal school, showing all to be growing as they deserve.

Why cannot the Kansas State Fair Company build a corn statue as one of the attractions—or a corn bridge, as we suggested two years ago?

It is rumored that the Minneapolis, Minn., flouring mills are to be consolidated in a trust company with a capital of \$10,000,000, mostly owned by foreign capitalists.

A great railroad consolidation scheme is announced. It is proposed to join the Canadian Pacific with the Union Pacific and Northern Pacific roads, headquarters at Boston.

A Colorado judge in an animal inspection case, held the law valid without a study of its merits, so that the disputed points may be early settled by the Supreme court.

The beef combine, like the sugar trust and all other similar combinations, are conspiracies against the common rights of the people and must be dealt with as such. Down with them all.

Senator Plumb favored us with a brief interview last week. He says he is pleased with the farmers' movement toward organization, for it is the only way they can hold their own and make their wants known to the law-makers.

The Editor of the *KANSAS FARMER* is in receipt of requests to deliver public addresses before farmers' meetings. He will respond in every case when he can do so without neglecting his editorial work, which is more important now than ever before.

**MR GROVER'S ANSWER--NO. 1.**

In order that Mr. Grover might have early inspection of the questions propounded to him in last week's paper, an advance sheet containing the questions was forwarded to him as soon as printed. Following is his answer:

MUSCOTAHA, KAS., July 18, 1889.

**KANSAS FARMER COMPANY:**—I have the advance leaf of the *KANSAS FARMER* containing my private letter and your long string of questions, also your letter asking me to reply and offering me the columns of the *KANSAS FARMER* in which to do so. It is said that it is easy for a fool to ask questions that no philosopher can answer, and of course everybody knows that it is. Your questions are very multitudinous, and involve much labor and investigation to answer them correctly in detail. Yet I will undertake it as soon as I can get the necessary prices current and other information, which I do not pretend to carry in my head ready at all times, on tap, for use. It is safe to say that the *KANSAS FARMER* could not, without much time spent in collecting facts, answer its own questions or one-half of them.

But for this issue of your paper I will give attention, and ask your attention and the attention of your readers, to a few facts that even leading protection journals admit, and some of them responsive to some of your questions.

The *New York Tribune* par excellence protection and Blaine's own organ, in its issue of June 24 in a leading editorial of three-fourths of a column, states that the tariff on sugar enables the Havemeyer sugar trust to rob the people of \$97,500,000, while the government gets only \$52,000,000 revenue from the sugar tax. Granulated sugar is selling in London for 3½ cents wholesale, and 5 cents retail, here at 9½ cents wholesale and 11 to 11½ cents retail. The *Tribune*, in the editorial referred to, shows that the trust has doubled the price of refined sugar to the people in the last two years. It demands the repeal of the sugar tax that the great sugar monopoly may be destroyed. It says public opinion demands it, and that Congress must give attention to the question whether the high tariff fosters trusts. I send you the editorial and ask you to print it (or return it to me) as a part of my reply to your public comments on my private note.

The twine trust is another example of extortion and robbery by means of the tariff. In Scotland binding twine sells at 9½ cents per pound, here at 18 to 18 cents, about twice as much. Binders American manufacture, the same as are used in Kansas, sold last year 35 per cent. less in Scotland than here, retail, and paid freight across the Atlantic. Please give your attention to sugar and binders and binding twine, and tell your readers how the sugar tax and the tax on steel, iron, sisal and jute, etc., helps those who use binders and binding twine. I will attend to the other items involved in the *KANSAS FARMER* questions in due time.

I wish to be understood as being in earnest, as to this crime of robbing the ignorant masses for the benefit of millionaires. It is time to call a halt. It is time to call public journals supported by protection funds to account. Your questions are cunningly prepared by such ring or trust organs as the *New York Express* and the Protection League, who are flooding the country with tracts filled with just such protection sophistries, very easily shown to be such, but which are cunningly devised and well calculated to deceive and humbug such farmers as read little and think less, who gave the \$2,000 protection majority last fall in Kansas.

The editors of the *KANSAS FARMER* ought to know better than to use such sophistries, and I think it a compliment to them to assume that they do. Monopolies and trusts and combines grow up behind a high tariff, as naturally as the waters that swept Johnstown accumulated behind the treacherous dam of the millionaire sportsmen. The tariff nationally will prove as destructive in the end to American industries, as was the deadly dam of Johnstown to the people and property of that doomed city.

Sugar would sell here as low as 5½ cents, retail, instead of 11 cents, if it were not for the tariff. Havemeyer and his attorney saw the Mills committee and their report was amended, putting the sugar tax back about where it was before. The Senate bill did not change it materially and it did not pass. Ninety-seven million, five hundred thousand dollars welded by the President of a trust has terrible potency when brought to bear on Congress or the press. As the *Tribune* says the people will not stand this robbery much longer. Mr. *KANSAS FARMER*, you shall have all you can stand of tariff discussion, and in reply to your questions, but I don't keep tariff statistics and prices current of all nations, ready made and out and dried for use at a moment's notice. I will give attention as fast as I can to the subject of your questions if the *Tribune* editorial and this article, prepared *instantly*, are not all you want.

A. J. GROVER.

[The *Tribune* article, June 24, 1889.]

ONE OF THE TRUSTS.

Two years ago fair refining sugar sold at \$4.44 per hundred pounds, granulated at \$5.94, and crushed at \$6.12. The cost of refining then appeared to justify a difference of \$1.50 per hundred pounds between the

raw sugar and the granulated, and \$1.68 between the raw sugar and the crushed. Now the prices are \$7.06 for fair refining, \$9 for granulated and \$9.50 for crushed. The refiners now exact \$1.94 per hundred pounds for their services between the raw and granulated sugar, and \$2.44 per hundred pounds between the raw and the crushed.

But that does not tell the whole story. The sugar trust made its boast at the outset that it could control the market for raw sugar in this country, and it appears to have done so at times. At other times, opponents of the trust are supposed to have advanced the price of raw sugar, either in an effort to get a supply or in an endeavor to embarrass the combination. In either case the real cause of the unnatural state of the market is the conspiracy to extort money from consumers, and the facts prove that up to date the amount of money extorted has been large. Roughly, the consumption at fifty pounds per capita, costs about 3 cents per pound more than it formerly did, or \$1.50 for every inhabitant, \$7.50 for every family, and \$97,500,000 for the entire population. The whole revenue derived by the government from the duties on sugar of all kinds was only \$52,000,000 last year. If the government could spare the revenue, and put an end to the sugar combinations by repealing all duties, it would simply present to the people a sum nearly twice as large as it now takes from them by the duties.

The theory that the advance in price has been brought about by natural causes only does not bear scrutiny. There is a vast deal of confusing talk about the statistical position, but there has been no such change in the world's supply of sugar as to cause a rise of 50 per cent. in price. The international convention which was intended to put an end to payment of bounties in Germany and France, has reported sundry propositions, but the British government has refused to take the responsibility of bringing the matter to a vote, and nothing can come of it in other countries without the accession of Great Britain. A proposition to cut off part of the import duty and to substitute a bounty to American consumers was favored in the Senate last winter, but could not pass a free trade House.

When Congress assembles next winter, if the sugar trust lives so long, one of the most important duties before representatives of the people will be to consider whether the existing duties on sugar, raw and refined, tend in any way to aid or encourage a combination to extort money from American consumers, and in what way the duties can be so changed as most effectually to defeat that combination. For there is no room for doubt about the hostility of this particular trust to the public interest. It has in fact suppressed production at important works, and it has in fact increased the cost of sugar to consumers. Its organizers and defenders have asserted that the existing duties do not help the trust in the slightest degree, and that their repeal would not lessen its power. Congress will find itself forced by public opinion to look into the matter very closely, and to make it entirely clear that members do not mean to leave any reasonable or proper thing undone that may help to protect the public against extortion.

Had the business of refining sugar been left free, it would have deserved consideration with other industries. A bounty to producers of American refined as well as of raw sugar, if it can be strictly limited so that no part of it can ever be paid to a concern connected with or controlled or operated by a combination to fix prices and control production, would be justified as a means of effectually encouraging sugar production in this country. That it is possible to render a nation completely independent of all others in this respect Germany has shown.

**COMMENTS ON MR. GROVER'S LETTER.**

Mr. Grover mistakes the object of our questioning. He talks about "all you want," "all you can stand," "if this letter is not enough," etc. The letter is not what we want, for it answers nothing. The *Tribune* article contains nothing that did not appear many times before in the *KANSAS FARMER*. What we want is a plain, truthful answer to every one of the questions submitted or a reason for not answering them. The object is not to invite controversy, but to afford Mr. Grover a good opportunity to show to our readers the errors in our views on the tariff if he can do so. If we are wrong in matters of fact it can be easily shown. Correct answers to our questions will throw a flood of light on the subject. If we are wrong we want to know it so that we may get right, or at least change for the better as soon as it can be done. We want to be as near right as possible with the light we have. . . . Although this letter is in no sense responsive to our questions, still it is worthy of some comment, for Mr. Grover, being a reader of the *KANSAS FARMER*, can have no reasonable excuse for not knowing what it teaches on this and other great public questions. Now to the letter. . . . He says our questions are "multitudinous," "cunningly prepared" for our use by "protection organs" in other States, that we cannot answer them ourselves without great labor, etc. Replying, we say the questions are neither multitudinous nor cunningly prepared, nor were they prepared or suggested by any person other than the writer hereof, and there is now in this office, as there ought to be in possession of every person who pretends to instruct the people on the subject, material which will satisfactorily answer every one of our questions. . . . While Mr. Grover is preparing his answers he wishes us to pay some attention to the twine trust, binders and steel. All these are included in the questions we have submitted to him, and his answers, if they are correct, would be ours; however, we will quote what was said editorially in the *KANSAS FARMER* on the twine trust April 4 last: "The thing for American farmers to do in this twine matter is to go to raising the fiber and

manufacturing the twine for themselves, first petitioning Congress to impose heavy duties on the foreign article." As to trusts in general we have often said they are criminal conspiracies against the common rights of the people and ought to be suppressed mercilessly by the strong hand of the law, punishing the conspirators by imprisonment and heavy pecuniary penalties. American-made binders are better for our uses than any which are made abroad and quite as cheap. High tariff duties on manufactured articles are never beneficial except only when they serve to establish a national industry or to raise revenue quickly in great emergencies, like war. It costs less in England to manufacture steel than it does in the United States, as the following statement concerning the making of steel rails shows: In England the average cost of labor in a ton of Bessemer steel rails is 12 shillings 8 pence, equal to \$3.07. The cost of pig iron is taken as 45 shillings per ton; Spiegleisen 50 shillings per ton, and coal at 7s. 6d. A ton of finished rail, then, costs—

Labor.....	\$ 3 87
Materials.....	15.08
Total.....	\$18 95

These figures are taken from the report of Consul Schoenof, under date Tunstall, England, October 2, 1888.

[See consular reports for October, 1888, page 457.] The selling price of such rails in England at that time, the Consul says, was £3 17. 6d., equivalent to \$18 75, and he says of that, on the next page (456): "That the price is not a paying one can be seen from the favorable consideration which is given by English manufacturers to the proposal of German rail manufacturers to revive the old steel combination, which has in view the raising of the price and the parceling out of the output and the trade between the English, German and Belgium manufacturers."

On page 457, same report, the cost of making a ton of steel rails in eastern Pennsylvania, December, 1887, are given as follows:

Labor.....	\$ 3 88
Materials.....	24.50
Total.....	\$ 28 38

Consul Schoenof was appointed by President Cleveland and is not a protectionist. . . . The *Tribune* article, though it is not responsive to any of our questions, and though we are not bound by it if it were, does not state what Mr. Grover says it does, as will be seen by reading the words we italicized. We marked them so that the reader would the more readily see that while the *Tribune* does not charge the sugar trust to the account of the tariff, it wants Congress to investigate the subject, and if any modification of duties will serve to crush the trust let the change be made at once. The *KANSAS FARMER* has long advocated free sugar, which would settle the question without the expense, time and trouble of an investigation. This paper denounced the sugar trust as a conspiracy long before the New York court so decided it to be and that event occurred a month at least before the *Tribune* article appeared. October 6, 1887, (and many times before) the *KANSAS FARMER*, discussing the surplus, said editorially: "Let us begin by striking out the duties on sugar." January 5, 1888, replying to this same A. J. Grover, we said: "The *KANSAS FARMER* does not defend the present war tariff. On the contrary, it was probably the first paper in the country to propose a plan for avoiding the accumulation of the surplus which is now so much talked about by reducing the tariff. We advocated the cutting off of \$50,000,000 at one stroke in the sugar tax and of reducing duties on other manufactured articles," etc. March 8, March 29, April 26, June 7, July 12, August 23, November 15, and November 22, same year, the repeal of sugar duties were demanded in these columns editorially, and the demand has been many times repeated since. Free sugar has been a standing issue with us a long time. We demand free sugar, free salt, free lumber and free coal.

We have received a pamphlet entitled "The Orlando B. Jennings Patented Lime Steam D fusion Process." Any person interested in sugar-making from sorghum would be interested in this work which fully explains the Jennings process. For a copy address O. B. Jennings, Box 504, Des Moines, Iowa.

It is reported that Dakota will be short on wheat this year on account of drouth and strong winds in the spring. The shortage is put at twenty-five to thirty million bushels. It is reported, also, that foreign wheat will fall below the average. How much truth there is in these reports will be better known later.

Referring to fast meat trains, the *Drovers' Telegram* says: "This movement, which is generally followed by all the roads, is of vast importance to Kansas City. A ninety-hour run to New York makes it possible for local packers to place their dressed beef in New York on an equality with Chicago and will place them just where they want to be."

A correspondent writing from Tribune, Greeley county, under date July 18th, says: "Everything in Greeley county is looking fine. Every kind of crop is doing well. Roasting ears and new potatoes are encouraging every one. The best grass I have ever seen since I have been in the county. Tribune is building a \$5,000 school house, and several good school houses will be put up over the county this year."

Here is a beef trust for you: Twenty farmers near Beulah, Ellis county, have formed a trust known as the "Beulah Beef Combine." H. Brown is President, A. Burns, Secretary, and H. T. Potter, beef dresser. The combine expects to "do up" Armour & Co. The plan is this: One beef is killed each week by one of the "big twenty," and divided into twenty equal parts. Tickets are issued in equal number. Each member of the trust takes the part of the beef bearing the number he drew, and all have fresh beef once a week.

A wise movement is under way to induce the holding of a convention in Topeka soon for the purpose of furthering the effort to secure the location and opening of a deep water harbor on the southern coast of Texas. Let us have the convention, and if Congress won't take hold with us, let us make the harbor ourselves. But Congress will help, because the harbor is of national importance. The Mississippi valley and all the region west is interested. A united movement will secure government aid. The West has helped on many a harbor East and South; now let the East and South help us.

The American Black Polled Aberdeen Angus Herd Book is now ready for the recording of all pedigrees. This herd book is founded on the good name, high standing and honor of the Scotland Herd Book, and all cattle recorded by the Polled Cattle Society's Herd Book of Scotland are admitted for entry in this American herd book. The Secretary says: "We shall do everything in our power to develop the growth, strength and beauty of this class of cattle in America. Fee for entry \$1 for all, no extra charges for imported cattle or cattle over one year old. Send \$1 and a certificate of entry will be sent you by return mail." Address Seth W. Mead, Secretary, Galesburg, Ill.

#### Wattles vs. Dakin--Correction.

In our statement of this case last week an error appeared. The affidavit, as the reader probably guessed, was that of Mr. Wattles and not of Mr. Dakin, as stated. It was a mistake that ought not to have been made, for the context shows that it was Wattles and not Dakin that made oath to the truth of his communication.

#### COME AND SEE KANSAS.

A great many people in the older States are interested in Kansas from one cause or another. Our phenomenal success, notwithstanding occasional reverses, is the wonder of the world, absolutely without a parallel. Besides our material development, there is something about the habits of our people which, like our air and sunshine, make friends for us. Thousands of persons who have friends and relatives here are thinking of coming to see for themselves. The KANSAS FARMER extends to all such a hearty welcome in the name of our farmers whose work has made the State what it is.

We have information from reliable sources that the railroads running from Missouri river west have authorized a series of "Harvest Excursions" from all territory east of the Missouri river to all points in Kansas, Nebraska, Dakota, Wyoming, Montana, Idaho, Utah, Colorado, New Mexico, Indian Territory and Texas. The rate will be one fare for the round trip. This will afford excellent opportunities for friends to come and see Kansas and to do it cheaply. Tickets will be sold on August 6 and 20, September 10 and 24, and October 8. The tickets will be limited to thirty days for the round trip. Stop-over privileges will be allowed, either going or returning, within this limit. We have received assurances that these tickets will be sold from all points west of and including St. Paul, Chicago and St. Louis, and we have good reason to believe that they will be sold by many lines throughout Ohio, Indiana, Michigan, the Southern States, etc.

The great West is an attractive region in general, and doubtless many persons will want to see Nebraska or Dakota or some other part, but most of the prospectors will see Kansas before returning. Let us all do what we can to secure our full share of the new citizens. Every one will help us in the work yet to be done. Many of them will want to purchase what we have to sell, and thus we will be mutually accommodated. Boards of trade in cities and county agricultural associations have here a good opportunity for doing some profitable advertising. We are authorized to state that Mr. Geo. T. Nicholson, General Passenger Agent of the Atchison, Topeka & Santa Fe at Topeka, will assist in the distribution of any literature which is forwarded to him descriptive of Kansas or any part of it.

Let farmers join in a general invitation to our friends in other parts of the country. Let us fill up with good citizens; it will add to our wealth and make our burdens lighter.

#### Pinkerton Detectives.

The employment, by rich corporations, of armed men under direction of a secret agency is an outrage upon the common rights of the people which cannot be excused or tolerated long. There is nothing American about it, and if it is not soon stopped, citizens will take charge of it.

The latest thing of the kind was the unloading of some three car loads of Pinkerton men in uniform with Winchester rifles and revolvers at the Homestead Steel works of Carnegie, Phipps & Co., near Pittsburg, Pa. The workmen were on a strike because of a dispute about wages. The company sent out advertisements for new men and brought the Pinkerton police to protect them. The iron workers at other places in and about Pittsburg held a meeting and resolved that if the Homestead troubles were not settled satisfactorily, and if it was attempted to put the new men at work under guard of the Pinkerton men, they (the iron workers) would go out in a body and "dispose of the Pinkertons." That did the work without the shedding of a drop of blood. As soon as the news reached Homestead, concessions were made and the strikers' demands were granted. Mr. Carnegie is in Europe.

He doubtless will see the propriety of his associates' change of front.

The law is made for protection. Every political division and subdivision of territory has its peace officers who are ready and equipped to protect citizens in all lawful pursuits. These Pinkerton men are hired murderers—nothing short of that—armed and uniformed, ready to shoot to death any citizen whom they are commanded by their superior to shoot. Their shooting and killing men is murder; they came to do that thing if directed to do it; hence we call them murderers. Some day the slaughter of a hundred or so of them will put an end to the cowardly business.

#### Horticultural Report.

The First Biennial Report of the State Horticultural Society is an excellent work, larger and better than any report ever issued by the society. Mr. Brackett, Secretary, did a good job in preparing the report. It contains a fruit manual, a manual of floriculture, besides miscellaneous papers from Professors Popenoe and Snow and many other competent writers on numerous subjects connected with horticulture. The report ought to be in the hands of every farmer in the State, but we suppose there will be barely enough to go around the privileged classes.

#### The Salt Trust.

The International Salt Trust is to have a capital of \$20,000,000, and will be incorporated under the laws of New York. E. B. Wheeler, a Michigan salt manufacturer says: "We have been shipping salt from Chicago, the distributing point, to Kansas, paying \$1 per barrel freight, and selling it at \$1.20. We have also shipped it east at the same exorbitant rates. The Kansas and New York producers have been sending salt into our territory with like results—loss both to them and to us. After the association is formed each manufacturing point will be apportioned its own district. The loss on the long freight haul will be adjusted and prices will go up ten cents a barrel." The association will begin business on January 1, next. Mr. Burt, the defeated candidate for Governor of Michigan, will be the first president. Of the stock, \$5,000,000 will be held by English capitalists.

#### Prof. Shelton's Promotion.

Last December the National Department of Agriculture received from the Chief Secretary of Queensland, Australia, a communication requesting the Department to nominate to that government a suitable person to be appointed instructor in agriculture. Secretary Rusk a few days ago appointed Prof. Edwin M. Shelton, of Manhattan, Kas., to the position, and so informed the Australian government.

This is an excellent selection. Prof. Shelton is in every respect fit and worthy. He has been a long time identified with Western agriculture in the highest and best sense. He is among the oldest educators in the State, has been Professor of Agriculture in our State Agricultural college ever since its founding. He is a scholar in learning, a gentleman in deportment, and a farmer in practice. The KANSAS FARMER congratulates him, the college and the State upon this just recognition of merit by the Department. We hope the final appointment will be made in due time, and wish the Professor good health and pleasant surroundings in his new field of labor.

#### Mormon Flies.

A dispatch dated at Dubuque, Iowa, the 19th inst., says: "This city is just recovering from an invasion by Mormon flies, such as it has never known before. Wednesday night these pests came up from the river and gathered about the electric lights so that people were compelled to abandon the streets. This morning newspapers and telegraph offices were compelled to close their

doors to escape the torture. These pests spring from sand beds along the river and are sometimes called sand flies. They are about an inch long with long wings and spring into existence after a few hours. After flying around the lights for one night they cease to exist. Along the levee the buildings were covered so thick with these pests that nothing could be seen but a writhing mass of insect life. In many places along the street they were three inches in depth where they had fallen dead. The stench from their bodies was unbearable, and the health authorities had several wagons employed in removing the offensive mass. Disinfectants have been applied. Old settlers along the river say they never saw the like before, and claim it is indicative of an unusually hot season.

#### The Kansas State Fair Open to the World.

The eyes of the whole nation are now turned toward Kansas, owing to the superiority of her prospects for grand crops, and it is to the interest of every Kansan to put forth his best efforts to make the State Fair this year the greatest advertisement ever sent out from the "Sunflower" State. The State Fair Association offers for county displays of farm products four premiums, \$200, \$150, \$100 and \$50, respectively, and every county in the State should make an exhibit, not merely to compete for these prizes, but to have their own locality represented. It will be an advertisement for the several counties, and aid in advertising Kansas to the hosts of visitors from abroad who will be here. This is the year of all years to show the world that Kansas is still in the lead.

For the display of farm products by an individual (the material may be gathered up all over the county) three premiums are offered, as follows: \$75, \$50 and \$25. This should be an incentive to the farmer to prepare a good collection from his county fair and bring or send to Topeka.

The dairy men will be in clover this year. In addition to the liberal premiums offered by the fair association, the following specials are added: The American Short-horn Breeders' Association offer \$250 as a premium for the production of the production of milk and butter. The Holstein-Friesian Association of America, offer two special premiums, aggregating \$300 and gold medals valued at \$100. The Hereford Cattle Breeders' Association offer special prizes aggregating \$175, for the best display in this class.

The premiums are all liberal and many additions have been made to the old list. The list for 1889 may be had free, upon application to the Secretary, E. G. Moon, Topeka. Every one interested in Kansas and a successful State Fair should send for a copy. The novelties and special attractions will be numerous and of the best character, and will be announced later.

#### Reduce Tariff Duties.

A called session of Congress in September or October seems probable. The first and most important proceeding will be, or ought to be, an immediate revision of the tariff schedules so that duties and revenues will be reduced. This must be done, done soon and done fairly, or the people in 1890 will elect men to Congress that will do it. Cut off sugar duties, all of them, put salt, lumber and bituminous coal on the free list; cut out all useless duties in the chemical department; reduce duties on iron and steel manufactures, and of wool and cotton goods down to the very margin of difference between actual cost here and in foreign countries. Take off the tobacco tax, and if more revenue is needed increase the excise tax on liquors. And then efficient measures must be adapted to prevent the immigration of paupers, criminals and other persons who do not intend to become citizens with us.

**Horticulture.**

**Cultivate the Orchard.**

For at least three years cultivate the young orchard. We have often said that if you desire to grow a crop of apples, you must give the crop something of the care you give to other crops. We have seen orchards planted in a grass field, and left to grow while the ground was occupied by the grass. We never saw a good orchard grown in that way, however. Plant the young orchard in some crop that will not shade the trees or prevent a full supply of moisture. Beans may be grown in the orchards; potatoes may be grown; tomatoes may be grown. It is hardly necessary to say that in cultivating an orchard crop the greatest care must be taken not to injure the trees. A frisky horse should never be taken into a young orchard. It is well, too, to pad the end of the single-tree. After three or four years of cultivation, the apple orchard may be put down in grass and pastured with pigs. There is no doubt of the advantage derived from letting swine run in an orchard. As to the kind of grass that should be sown in the orchard, one of our most experienced orchardists says that it should be clover, because it does not form a sod, and the growth is not heavy in dense shade, and if pastured moderately close with swine the orchard will be benefited more by the droppings of the pigs than damaged by the clover. The orchard ought to be cultivated, however, about every third year.—*Western Rural.*

**Select Good Seed.**

The editor of the *Western Rural* wisely insists on farmers and gardeners using none but good seed, and urges that all seed be tested. "It is not necessary to say that poor seed entails great loss upon those who till the soil, every year. We all know that by experience. And we are not referring now to poor varieties. Then, it is a matter of great importance to us to select the best varieties. No farmer or gardener ought to be satisfied with anything short of the best and he should make it a subject of constant study to learn what varieties are best. No difference how little he grows he should grow that which is most productive and of the best quality. If he is growing something for home use only, that should be his rule, for he ought to have as much regard for his own stomach as he has for the stomachs of other people. Unfortunately, however, the farmer and gardener do not always seem to have. It is the too common practice, for instance, to sell the best and keep the inferior for home consumption. The first thought should be for our own family, and if there is anything left after they are supplied sell it. We therefore most earnestly advise that even though enough for one meal be grown, it be the best. And if we are growing for the market, we must produce the best if we expect to make our operations profitable. We must remember that if we are negligent about those things, others are not, and that consequently the market is supplied with the best in large quantities, and this is what consumers will seek for.

"But what we wish particularly to call attention to at this time is the matter of vigor in seeds. It is within our power to test this, whether it be seed corn or any other seed. It is a poor way to test seed to plant it in the field or garden, and wait until it grows there, or proves itself good for nothing. We can do this sort of work much better in a box in the house, and we ought to do it. And it should make no difference whether we purchase the seed or grow it ourselves. Be sure that it has life in it before we plant it. If we have not been careful about the saving of our seed, in the selection of good seed and in the proper preservation of it, better not plant it. It is far better under such circumstances to buy fresh seed."

**Pansies--How to Raise Them.**

A correspondent of *Prairie Farmer* thus describes methods of raising this beautiful plant:

We glean from Mr. T.'s experience that seeds to produce plants for early spring blooming may be sown from the middle of August to the middle of September, and, in the North, wintered in a cold frame, when the winters are too severe.

South of central Illinois it is better to depend mainly on spring and early summer flowers from seeds sown in the fall, as soon as the extreme heat of summer has passed. Some think that plants started in the greenhouse early in January are better than those wintered over in frames, but they are not quite so early, and if the frame plants are transplanted once, as early as spring will permit, they are as good in every respect.

These, followed by hot-bed plants, and again by an early sowing out-of-doors, will furnish a succession of plants until orders cease. But few persons who buy plants know that in the North our most beautiful pansies are in autumn from spring-sown seeds. Amateurs may have early flowers by sowing in boxes in the window, giving the young plants plenty of light and not too much heat.

Pansies commence to flower in from seventy to eighty days from time of sowing, under reasonably favorable conditions.

The ability of the pansy to stand hot weather depends greatly on its treatment. If the soil is rich enough, and not too dry, or in too hot a situation, pansies, with frequent cultivation, will stand a long siege of hot weather, if no seeds are allowed to form. With this care one can have pansies from young plants in midsummer.

The plants which have flowered in the spring will do well again in the fall, if the long branches are cut back late in June. The plants which have flowered through the summer and fall will usually winter over well if protected with a light covering of straw or leaves, but thorough surface drainage must be provided to prevent water from accumulating around the plants and forming ice about them. In the cold frames a considerable mixture of sand is desirable, as the plants with protection winter better in sandy than clayey soil.

Young pansy plants are quite hardy if protected from sharp winds, and not allowed to become too wet near the surface of the ground.

**Sowing Annuals.**

The seeds of annuals should in nearly all instances be sown in locations free from shade, with soil well pulverized and enriched with stable manure. The perennials require less sun than annuals, although a few such plants as the pansies will do well if they receive the sunlight for half a day. In most catalogues there is a distinction made between the "tender annuals" and the "hardy annuals," which is a necessary precaution for all who are not intimately acquainted with the nature, needs and requirements of the plants that they intend to grow. The former should not be planted out in the green ground until spring is well advanced, and then they should be given the most favorable locations, so far as sun and richness of soil are concerned. The method of sowing them also differs more or less, but certain general rules can be laid down that will apply in nearly all cases where annuals are to be sown in the open ground. They can be sown thickly in one bed, and then transplanted after they have come up and attained a little growth. The better way, however, is to sow them in rows a foot or two apart, and so thickly that some can be transplanted. The soil should be pulverized and stirred up carefully before the seeds are put in, and then some fine soil shaken over them, sufficient to cover the seeds from a quarter of an inch to an inch, accord-

ing to their size. A sieve is the best thing for this work. The bottom should be mad of mosquito wire netting, which will sift the soil down to its proper fineness. After this is done, a board or trowel should be used to smooth down the surface of the bed. This will pack the dirt around the seeds and prevent them drying up.

Labels should always be placed in the center of each bed, or at the end of each row. Weeds should be diligently rooted up as soon as they appear above the surface. Many weeds grow faster than the flowers, and if allowed to get the start they will absorb all of the strength of the soil and smother the flowers. If the flowers come up thickly they should be thinned out, and only the strong, healthy-looking ones allowed to remain. Those that need staking should be supplied with props early in their growth and not forced to hold up their weak heads until they begin to droop.—*Helen Wharburdon, in Indiana Farmer.*

The bad man's motto: "There is room at the top." This top may be supplied with a good crop of fine hair by using Hall's Hair Renewer. Try it.

**"Rally Round the Flag, Boys!"**

The Grand Army Reunion to be held at Milwaukee (August 26 to 31, inclusive,) will, in many respects, be one of the most noteworthy of commemorative events. There will be no lack of distinguished speakers. But the most attractive features will be the "tie that binds" men who have fought, starved and bled for a sacred cause, the renewal of old-time associations, the rehearsal of war experiences, and the rekindling upon the altar of patriotism of undying devotion to "one flag and one country." Veterans and their friends will be pleased to know that from all stations on the Chicago, Rock Island & Pacific Railway, on its main lines and branches both east and west of the Missouri river, the price of tickets has been placed for this occasion at one fare for the round trip, while children under 12 and over 5 years of age will be charged only one-half this excursion rate, or one-quarter the regular fare for the round trip. Tickets will be for sale at all principal stations on the Rock Island Route, August 21 to August 25, 1889, inclusive, good for continuous passage to Milwaukee at any time between these dates, and good for return passage, leaving Milwaukee on any date between August 27 and September 5, 1889, inclusive. Holders of such tickets who desire to make side excursions from Milwaukee to points beyond, in any direction, can, by surrendering their return coupon tickets for safe keeping to the Joint Agent at Milwaukee, have them honored to original starting point where ticket was purchased (by proper indorsement), on any date not later than September 30 1889.

**Farm Loans.**

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought. T. E. BOWMAN & Co., Jones Building, 116 West Sixth street, Topeka, Kas.

**ST. JACOBS OIL**  
TRADE MARK  
**THE GREAT REMEDY FOR PAIN**  
For Stablen and Stockmen.  
CURES  
Cuts, Swellings, Bruises, Sprains, Galls, Strains, Lameness, Stiffness, Cracked Heels, Scorches, Contractions, Flesh Wounds, Stringhals, Sore Throat, Distemper, Colic, Whitlow, Foul Evil, Fistula, Tumors, Splints, Ringbones and Spavin in its early stages. Directions with each bottle.  
AT DRUGGISTS AND DEALERS.  
THE CHARLES A. VOGELER CO., Baltimore, Md.

**HIRES**  
25c. HIRES' IMPROVED 25c  
**ROOT BEER!**  
IN LIQUID NO BOILING EASILY MADE  
THIS PACKAGE MAKES FIVE GALLONS  
MAKES FIVE GALLONS  
DELICIOUS AND SPARKLING  
**ROOT BEER**  
The most APPETIZING and WHOLESOME TEMPERANCE DRINK in the world. TRY IT.  
Ask your Druggist or Grocer for it.  
C. E. HIRES, PHILADELPHIA.

**BEECHAM'S PILLS**  
(THE GREAT ENGLISH REMEDY.)  
**Cure BILLIOUS and Nervous ILLS.**  
25cts. a Box.  
OF ALL DRUGGISTS.

**OEIL'S FRUIT FARM AND NURSERY.**  
J. F. OEIL, Prop'r, North Topeka, Kas. Fruit and Ornamental Trees, Vines, Plants and Shrubs. Cherry Trees and Small Fruits a specialty.

**KANSAS HOME NURSERY**  
OFFERS  
BEST HOME-GROWN TREES. Choice Fruit and Ornamental Trees of real merit for the Western Tree-Planters. Also best Fruit and Flower Plants. Water-proof. Samples by mail, 10 cents each; \$5 per 100, by express.  
A. H. GRIESA, Drawer 28, Lawrence, Kas.

**Hart Pioneer Nurseries**  
FORT SCOTT, KAS.  
Established 1865. 460 Acres. Full line of Nursery Stock. Forest Seedlings for Timber Claims and Apple Trees for Commercial Orchards a specialty. Large Premium for planting forest trees in spring of 1889. Treatise on cost and profit of apple orchard, free on application. Good salesmen wanted.

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

**POTTED AND LAYER STRAWBERRY PLANTS.**  
Haverland, potted, \$2 per 100; Jessie, Bubach No. 5, Warwick and Parry, \$15 per 1,000, potted. Windsor Chief, Capt. Jack, Crescent, Miner's Prolific Jas. Vick, May King, Chas. Downing, potted, \$10 per 1,000. Layer plants, \$2 per 1,000.  
H. H. KERN, Manager, Bonner Springs Nurseries, Bonner Springs, Kas.

**Mount Hope Nurseries**  
For the Fall of 1889 and Spring of 1890, we call attention to our IMMENSE STOCK of Nursery Stock in all its branches, especially of Cherry and Pear Trees, Standard and Dwarf. This is native stock and is worth twice that of Eastern-grown. Wholesale trade a specialty. Catalogue in August. Agents wanted. Correspondence.  
A. C. GRIESA & BRO., Lawrence, Kas.

**LA CYGNE NURSERY.**  
**MILLIONS**  
OF  
Fruit Trees, Shade Trees, Small Fruits, Vines, Ornamental Trees, Etc.  
TEN MILLION FOREST TREE SEEDLINGS.  
ONE MILLION HEDGE PLANTS.  
ONE HUNDRED THOUSAND TWO-YEAR APPLE TREES—Grown from whole root grafts.  
FIVE THOUSAND IRISH JUNIPERS—Two-feet, SPLENDID WALNUTS, and other forest tree seeds and nuts, prime and fresh.  
Full instructions sent with every order, and perfect satisfaction guaranteed. Send for full list and prices. Address  
D. W. COZAD  
Box 25, LACYGNE, LINN CO., KANSAS

**BLAKE'S ANNUAL WEATHER PREDICTIONS FOR 1890,**  
According to Mathematical Calculations, based on Astronomical Laws will be ready for mailing in August, 1889. This will be a larger book than any I have heretofore issued. It will contain tables giving the maximum, minimum and mean temperature, in degrees Fahrenheit, for each month in the year. Other tables give the probable amount of precipitation in inches for each month in the year for each State and Territory, all of the large States and part of the Territories being subdivided into districts with a separate calculation for each, making 153 districts. The weather for part of Canada and the principal States in Europe is also given. The main features of my predictions have proved correct for the last fifteen years, though I cannot always make all the details correct. But they are sufficiently so to enable farmers to know what crops to plant and when so as to insure best results. My advice last year to seed extensively with winter wheat on account of a favorable winter and spring, and because this summer would be too dry for corn, has proved entirely correct. The planetary situation for both this year and next will be such as to produce great extremes, with only short spells of ordinary weather. Neither farmers nor merchants can conduct business successfully without knowing in advance what these extremes will be. To these ordering the book now I send by return mail a confidential letter of two pages giving the main features of the weather for 1890, as it will take me from two to three months to complete the details for the book; while many wish to know the main points now, so as to know whether or not to prepare for fall seeding and as to what plans for the future it is best to form. In future the weather predictions will be found exclusively in these books, and for that reason the Annual for 1890 will be very full and complete, with advice as to crops and prospects in each State. Price of the Annual for 1890 is \$2 per copy, and price of Weather Tables for 1889 is 50 cents per copy. Address  
O. C. BLAKE, Topeka, Kansas.

### The Poultry Yard.

A Few Practical Thoughts for Farmers.

EDITOR KANSAS FARMER:—Farmers who keep large flocks of common fowls are often prevented from improving them because they think it costs too much to do so. They calculate on two or three hundred fowls at \$2 or \$3 each, and hold on to their old stock, contented to stand where they have been standing for many years past. The expense of infusing new blood or buying and discarding the common stock is indeed trifling in comparison with their ideas of what it would cost. To proceed rightly, the purchase of a pair, trio or a breeding pen is all that is necessary to get the foundation of a strain, and it means a careful and intelligent study of your foundation stock to build up by good management that will produce birds of true value and merit.

Upon every farm are plenty of out-buildings, in some corner of which a nice little coop may be fitted up with a small run attached to it, at a trifling outlay of time and labor. Here the work of improving the farm fowls will really begin. Some care should be exercised in building this yard to make it so that the mongrels, who usually fly like pigeons and can crawl through the smallest opening, may not get in with the fine stock and fight with or otherwise disturb them. Wire netting covers for roofs and sides is the best way of keeping them out. The fowls and such a yard complete the fixings necessary to change the stock on any place.

Whether to start with fowls or eggs is a question each must settle for himself. If we were doing it and were in a hurry to make the desired change which we believe we would be with the average flock of common fowls, we would start with fowls, as we would gain a year's time by doing so. One man will never buy anything but fowls, while another is equally positive that eggs are at all times the cheapest way of getting new fowls. But in either case we will suppose the farmer has a few hens or pullets ready to lay, and the smile of spring is beginning to appear between the rain and snow storms of March. The best male and the hens or pullets should now be placed in the yard, if not already there, and all eggs carefully saved for hatching. Soon some of the common hens will become broody and they can be used in hatching the eggs of the yarded fowls. Do not set an egg of the common stock, and if any of them steal their nests, raise the chicks until large enough for broilers, and then dispose of them, thus giving the good chicks the whole range and all the attention. Two or three hens of some non-sitting breed, or four to six of those which lose more or less time in waiting to sit, will furnish the eggs necessary, under favorable circumstances, to raise all the fowls needed to replace the common stock.

The last and most important act of the change comes in killing, or selling off, every one of the old fowls. Right here is where many lose the result of all their outlay of time and money. They have a few pets among the superannuated old cocks and hens, and keeping them, in a few years few traces remain of the once fine fowls which graced the place.

### The Busy Bee.

Bumble Bees and Clover.

EDITOR KANSAS FARMER:—Over a year ago you copied an article from a Missouri paper which stated that when Australia was first settled the people could not raise clover seed because there were no bumble bees to fertilize the seed. I have since seen in two different papers that Maurice Thomson told an Indiana farmer that a nest of bumble bees were worth \$25 in a clover

field where the farmer wished to raise seed. Would it be too much to ask the Professors of the Agricultural college of Kansas to settle this matter if they can, as this is the season of clover blossoms? I know that a nest of bumble bees are worth no more in a clover field than a nest of tumble bugs, and know that clover seed can be raised without any assistance from either of them. As my name would have no weight with the general public let it be settled by men that will give the people confidence in their statements. C. WELCH, Parsons, Kas.

#### Remedy for Foul Brood.

From the description given by your correspondent W., in your issue of July 6, I hardly think it is a case of foul brood.

Foul brood is a disease of the brood and does not seem to affect the mature bees. The caps of the sealed brood appear indented and pierced, or partly removed, and the cells contain a putrid sticky, coffee-colored substance (all that remains of the larvæ), emitting a most disagreeable stench, perceptible several feet from the hive. As our friend W. does not mention this disagreeable odor, and moreover he says the brood appears to be two-thirds or fully developed, I am inclined to think it is not foul brood. If, however, he discovers any of the above symptoms, the only remedy is to burn up every comb in the apiary, and this must be done thoroughly, taking care not to leave any pieces lying around on the ground, then thoroughly cleanse all hives and floor boards with boiling water and finally spray the hives and bees with this solution: Salicylic acid, 1 ounce; borax, 1 ounce; water, 4 pints.

This treatment compels the bees to build new combs entirely throughout the whole apiary. It is furthermore necessary that any neighboring apiary having foul brood should be treated in the same manner. If the owners refuse to do this, they may be compelled by law (see page 195 in a back number of the Rural Press) to burn up all hives affected with this disease.

Foul brood is very infectious and spreads so rapidly that in one season a whole neighborhood may be infected with it, whilst its eradication and subsequent prevention will require great perseverance and constant attention.

There is also a comparatively new disease among bees known as *claviceps apium*, but I have not yet seen or heard of a case in California. This disease first originated in Denmark about nine years ago, and is a fungoid disease affecting both brood and bees. In this case the brood appears to be dried up in the cells, and although some of the bees hatch out, they are quite lame and unable to move their fore legs. They creep about the hive and on the ground as if they had the cramp and die off in great numbers, and ultimately the hive becomes queenless. It is a contagious disease and is supposed to have originated from the black smut or ergot of rye. The same treatment is necessary as for foul brood, using the salicylic acid solution to spray both hives and bees. It is also advisable when handling bees having any contagious disease to wash the hands in water to which some of the salicylic acid solution has been added to prevent communicating the disease to other hives.

I strongly advise W. to follow the plan I have recommended for foul brood, whether his disease is that or not; if it is a contagious disease, that is the best thing he can do. I shall be glad to hear further particulars from W. and will gladly give him any further advice to assist him out of his trouble (if necessary)—William Styan, in Pacific Rural Press.

There is a value in many small things about the farm. For instance, a spool of soft copper wire may be effectually used to mend a broken implement or harness and save much valuable time in the busy season, and a piece of telegraph wire makes a hoop

for a barrel or tub that is quickly and easily made and will stay in place better than a hoop made of hoop-iron. If it is required to be especially strong, it may be doubled or trebled.



### INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING AND beautifying the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible. CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood diseases, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50 cents; SOAP, 25 cents; RESOLVENT, \$1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS. Send for "How to Cure Skin Diseases."

Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

KIDNEY PAINS, Backache and Weakness cured by CUTICURA ANTI-PAIN PLASTER, an instantaneous pain-subduing plaster. 25 cts.

## Wanted NEW SUBSCRIBERS A Big Premium!

Given away to everybody who will send us only two new subscribers at \$1 each. First—We will send Blake's Weather Tables and Predictions to any one sending us two new subscribers and \$2. Second—We will mail the valuable dairy book, "A B C Butter-Making," to any one sending us two new subscribers and \$2; or, Third—We will send the Home Magazine, a splendid monthly ladies' home journal, one year, to any one sending us only two new subscribers and \$2. These valuable premium offers are open to every reader of this paper. Send in the names, and mention which premium you wish. Address KANSAS FARMER CO., Topeka, Kansas.

### FREE READING!

If you are desirous of receiving papers, catalogues, samples, etc., send 10 cents to have your name inserted in our Agents' Directory, which goes to publishers all over the U. S. Address R. E. ELLIOTT, Dawsonville, Ga.

### AN EASY WAY TO MAKE MONEY!

AGENTS can make from \$100 to \$150 a week, representing The Consumers' Supply Association. No Capital! No Samples! No Trouble! Write for particulars to The Consumers Supply Association, 153 & 157 Broadway, New York.

## A MAN

UNACQUAINTED WITH THE GEOGRAPHY OF THE COUNTRY WILL OBTAIN MUCH INFORMATION FROM A STUDY OF THIS MAP OF THE



### Chicago, Rock Island & Pacific Ry.

Including Lines East and West of the Missouri River. The Direct Route to and from CHICAGO, ROCK ISLAND, DAVENPORT, DES MOINES, COUNCIL BLUFFS, WATERTOWN, SIOUX FALLS, MINNEAPOLIS, ST. PAUL, ST. JOSEPH, ATCHISON, LEAVENWORTH, KANSAS CITY, TOPEKA, DENVER, COLORADO SPRINGS and PUEBLO. Free Reclining Chair Cars to and from CHICAGO, CALDWELL, HUTCHINSON and DODGE CITY, and Palace Sleeping Cars between CHICAGO, WICHITA and HUTCHINSON.

SOLID VESTIBULE EXPRESS TRAINS of Through Coaches, Sleepers, Free Reclining Chair Cars and (East of Mo. River) Dining Cars daily between CHICAGO, DES MOINES, COUNCIL BLUFFS and OMAHA, with FREE Reclining Chair Car to NORTH PLATTE (Nebr.), and between CHICAGO and DENVER, COLORADO SPRINGS and PUEBLO, via St. Joseph, or Kansas City and Topeka. Splendid Dining Hotels west of St. Joseph and Kansas City. Excursions daily, with Choice of Routes to and from Salt Lake, Portland, Los Angeles and San Francisco. The Direct Line to and from Pike's Peak, Manitou, Garden of the Gods, the Sanitariums, and Scenic Grandeur of Colorado.

Via The Albert Lea Route. Solid Express Trains daily between Chicago and Minneapolis and St. Paul, with THROUGH Reclining Chair Cars (FREE) to and from those points and Kansas City. Through Chair Car and Sleeper between Peoria, Spirit Lake and Sioux Falls via Rock Island. The Favorite Line to Watertown, Sioux Falls, the Summer Resorts and Hunting and Fishing Grounds of the Northwest. The Short Line via Seneca and Kankakee offers facilities to travel to and from Indianapolis, Cincinnati and other Southern points. For Tickets, Maps, Folders, or desired information, apply at any Coupon Ticket Office, or address E. ST. JOHN, JOHN SEBASTIAN, Gen'l Manager. CHICAGO, ILL.

### Special Club List.

Table with 2 columns: Publication Name and Price. Includes 'The Kansas Farmer' at \$1.00, 'The Kansas Democrat' at \$1.50, 'The Kansas City Times' at \$1.75, etc.

## EVERY FARMER

Who is obliged to borrow, should do so on the best possible terms. Write direct to the lender and save Agent's Commissions. Money always ready when papers are signed. NO DELAYS! NO EXTRAS!

Russell & Metcalf, Lawrence, Kas.

## IT CAN BE DONE! Butter and Cheese Factories

Built, furnished, equipped and put in operation on easy terms in any town in the United States by giving Davis & Rankin. Sixty days' notice. Work completed and in operation before a dollar is asked. Experienced men furnished with each factory to operate all machinery. OVER 2,000 NOW IN OPERATION. Cost of complete factories range from \$2,000 to \$8,000, according to the style of building and grade of machinery. Controllers of new patent machineries. Also, old styles at a very low price. 240 to 254 WEST LAKE ST., CHICAGO, ILL.

## Dr. WHITTIER

ORIGINAL Dr. Whittier in Kansas City. OLDEST Dr. Whittier in Missouri, and ONLY practiced medicine over 15 years. CURES Syphilis, Scrofula, Rheumatism, Gout, Eczema, etc., causing ulcers, eruptions, pain in bones, swelling of joints, enlarged glands, mucous patches in mouth, falling hair, and many other symptoms. All poison thoroughly and permanently eradicated from the system by purely Vegetable Treatment. Spermatorrhea, Impotency, Nervous Debility, etc., resulting from youthful indiscretion, excess in matured years, and other causes, inducing some of the following symptoms, as dizziness, confusion of ideas, defective memory, aversion to society, blotches, eruptions, exhaustion, Varicocele, etc., are permanently cured. URINARY, KIDNEY and BLADDER troubles, Weak Back, Incontinence, Gonorrhoea, Gleet, Stricture, etc., are quickly and perfectly cured. Consult the OLDEST DR. WHITTIER in person or by letter first. No promises made that age, integrity and experience do not justify. Medicines sent anywhere by mail or express, secure from observation. Consultation free and invited. Office hours, 9 to 5, 7 to 8; Sunday, 10 to 12. NO FEE UNTIL CURED, from responsible persons, on diseases of men, free. Address, H. J. WHITTIER, M. D., 10 W. Ninth St., Kansas City, Mo.

**Alliance Department.**

This Department of the KANSAS FARMER has been designated as the authorized official State organ of the Farmers' Alliance and Co-operative Union for the State of Kansas.

**Partial List of Kansas Alliances.**

Through courtesy of Mr. Secretary T. J. McLain, Peabody, we are enabled to present our readers with a partial list of alliances in the State. We are promised a complete list as soon as necessary revision can be effected:

- Colfax Township Alliance No. 724 - J. S. Brickler, Secretary, Chanute, Wilson county.
Olive Branch Alliance No. 725 - W. O. Gants, Secretary, Wilsey, Morris county.
Fairplay Alliance No. 728 - L. W. Barnes, Secretary, Ebbing, Butler county.
Helmick Alliance No. 727 - T. M. Myers, Secretary, Wilsey, Morris county.
Pleasant Bridge Alliance No. 728 - Wm. Knapp, Secretary, Norton, Norton county.
Clark's Creek Alliance No. 729 - June Baxter, Secretary, White City, Morris county.
Warren Center Alliance No. 730 - G. W. Brington, Secretary, Alberta, Morris county.
Hiatville Alliance No. 731 - Samuel Odgers, Secretary, Hiatville, Bourbon county.
Union Alliance No. 732 - J. M. Reed, Secretary, Mulberry Grove, Crawford county.
Mystic Valley Alliance No. 733 - Benj. Cary, Secretary, Anson, Sumner county.
Rocky Vale Alliance No. 734 - C. W. Case, Secretary, Hiatville, Bourbon county.
Fairplay Alliance No. 735 - J. F. Russell, Secretary, Peabody, Marion county.
Lone Star Alliance No. 736 - J. A. Jon's, Secretary, Brainard, Butler county.
Excelsior Alliance No. 737 - John Blythe, Secretary, Parkerville, Morris county.
White City Alliance No. 738 - L. Lemons, Secretary, White City, Morris county.
Seidon Alliance No. 739 - A. L. Douglass, Secretary, Seidon, Sherman county.
Center Alliance No. 740 - Fred Peters, Secretary, Kanona, Decatur county.
Harrison Alliance No. 741 - Sanford Plummer, Secretary, Tribune, Greeley county.
Spring Valley Alliance No. 742 - B. F. Ambler, Secretary, Florence, Marion county.
Buffalo Township Alliance No. 743 - R. B. Briggs, Secretary, Great Bend, Barton county.
Prairie Grove Alliance No. 744 - H. W. Helron, Secretary, Lincoln, Lincoln county.
Fairview Alliance No. 745 - T. J. Murnane, Secretary, Girard, Crawford county.
Wilburn Alliance No. 746 - B. W. Butts, Secretary, Wilburn, Ford county.
Skiddy Alliance No. 747 - S. T. Pember, Secretary, Skiddy, Morris county.
Bellevue Alliance No. 748 - Perry A. Evans, Secretary, Sterling, Rice county.
Pleasant Hill Alliance No. 749 - George O. Gould, Secretary, Fawn, Montgomery county.
Naragansett Alliance No. 750 - Percy Daniels, Secretary, Girard, Crawford county.
Center Valley Alliance No. 751 - D. B. Osborn, Secretary, Girard, Crawford county.
Pleasant Hill Alliance No. 752 - D. M. Grove, Secretary, Almena, Norton county.
Idell Alliance No. 753 - James McCloud, Secretary, Idell, Crawford county.
Milford Alliance No. 754 - A. J. Stanhill, Secretary, Stowell, Hamilton county.
Fairview Alliance No. 755 - Mrs. Henry Clay, Secretary, Almena, Norton county.
Salt Creek Alliance No. 756 - Fred Scholar, Secretary, Barnard, Lincoln county.
Arber Alliance No. 757 - R. C. Sturgeon, Secretary, Rawlins, Rawlins county.
State Valley Alliance No. 758 - T. J. Eaton, Secretary, Wellington, Sumner county.
Midway Alliance No. 759 - M. E. Harshberger, Secretary, Walton, Harvey county.
Logan Township Alliance No. 760 - S. B. Harvey, Secretary, Minneapolis, Harvey county.
Green Township Alliance No. 761 - D. J. Wimer, Secretary, Knox, Sumner county.
Pleasant Valley Alliance No. 762 - Isaac Green, Secretary, Girard, Crawford county.
Midland Alliance No. 763 - Peter Gasch, Secretary, Sterling, Rice county.
Pleasant Valley Alliance No. 764 - L. Wright, Secretary, Alden, Rice county.
Victory Alliance No. 765 - Sumner Smith, Secretary, Girard, Crawford county.
Four Mile Alliance No. 766 - H. A. J. Coppins, Secretary, Potwin, Butler county.
North Union Alliance No. 767 - M. C. Hodgson, Secretary, Little River, Rice county.
Garfield Alliance No. 768 - J. W. Lyons, Secretary, Minneapolis, Ottawa county.
Bell Plain Alliance No. 769 - W. Erskine, Secretary, Norton, Norton county.
Millerton Alliance No. 770 - W. T. Brown, Secretary, Millerton, Sumner county.
Garfield Alliance No. 771 - Eli Draper, Secretary, Farlington, Crawford county.
Morning Star Alliance No. 772 - W. D. Williams, Secretary, Council Grove, Morris county.
Osage Alliance No. 1 No. 773 - James Cassin, Secretary, Girard, Crawford county.
Wilsey Alliance No. 774 - E. A. Mays, Secretary, Wilsey, Morris county.
Forest Home Alliance No. 775 - O. A. Kenyon, Secretary, Crawford, Rice county.
Union Alliance No. 776 - A. W. Wise, Secretary, Clearwater, Sedgwick county.
Garfield Alliance No. 777 - A. R. Moore, Secretary, Idana, Clay county.
Almena Alliance No. 778 - B. Churchill, Secretary, Almena, Norton county.
Fairview Alliance No. 779 - W. B. Williams, Secretary, Council Grove, Morris county.
Green Valley Alliance No. 780 - J. R. Naylor, Secretary, Furley, Sedgwick county.
Logan Alliance No. 781 - T. J. Spears, Secretary, Atwood, Rawlins county.
Lost Springs Alliance No. 782 - A. B. Partridge, Secretary, Lost Springs, Marion county.
Lightning Creek Valley Alliance No. 783 - J. H. Crawford, Secretary, Girard, Crawford county.
Gooding Alliance No. 784 - J. H. Keithley, Secretary, Girard, Crawford county.
Spring Creek Alliance No. 785 - W. P. Johnson, Secretary, Council Grove, Morris county.
Independence Alliance No. 786 - George Jekyl, Secretary, Bayneville, Sedgwick county.
Wilson Alliance No. 787 - F. B. Watson, Secretary, Pittsburg, Crawford county.
Grant Township Alliance No. 788 - Henry Bueth, Secretary, Lincolnville, Marion county.
Neutral Alliance No. 789 - E. W. Van Dyke, Secretary, Green Elm, Crawford county.
Union Alliance No. 790 - J. R. Elaston, Secretary, Atwood, Rawlins county.
Cedar Alliance No. 791 - J. B. Cooley, Secretary, Wonevau, Chase county.
Fairview Alliance No. 792 - W. M. Jones, Secretary, Chace, Rice county.
Beman Alliance No. 793 - F. C. Crosier, Secretary, Beman, Morris county.
Henry Township Alliance No. 794 - William Cox, Secretary, Tescott, Ottawa county.
McDonald Alliance No. 795 - D. W. Stapp, Secretary, McDonald, Rawlins county.
Denmark Alliance No. 796 - O. Bernhardt, Secretary, Denmark, Lincoln county.
Pauk Alliance No. 797 - H. J. Button, Secretary, Girard, Crawford county.
Prairie View Alliance No. 798 - O. L. Smith, Secretary, Prairie View, Phillips county.
Rose Hill Alliance No. 799 - K. P. Dykes, Secretary, Chardon, Rawlins county.
Liberty Alliance No. 800 - L. Smith, Secretary, Long Island, Phillips county.

North Divide Alliance No. 801 - W. N. Mosler, Secretary, Atwood, Rawlins county.
Freedom Alliance No. 802 - J. C. Watson, Secretary, Long Island, Phillips county.
Bunker Hill Alliance No. 803 - Richard Coyle, Secretary, Geneseo, Rice county.

**State Officers' Names and Addresses.**

President, I. M. Morris, White City; Vice President, L. D. Herlocker, Farlington; Secretary, T. J. McLain, Peabody; Treasurer, W. A. Burford, Cicero; Executive Committee - J. N. Palmer, Peabody; John Gray, Lyons; Henry Shapcott, Wellington; L. Current, White City; J. D. Jacobs, Peabody.

This is valuable information, and every interested person, if he does not preserve a file of the FARMER, ought to cut out the list and put it in his scrap book for future use. As changes are made, they will be published in these columns.

**Notice to Committees.**

The members of the following committees of K. F. A. and C. O. U. are hereby called to meet in Newton, as follows: Committee on State Constitution, on Monday before the second Wednesday in August; and Committee on Insurance will meet on Tuesday before the second Wednesday of August, or on Monday and Tuesday next preceding the day of meeting of State Alliance, which is on the second Wednesday of August, 1889; and request that members who have any changes in constitution they wish to suggest, will forward the same to Bro. J. B. French, Burrtown, Kas., so that he may receive them by Monday morning at least. W. H. BIDDLE, Chairman.

**Farmers' Alliance Notes.**

Prairie Center, Osage county, organized alliance July 11, 1889, with thirty-five members. Geo. W. Ely, Secretary.

The KANSAS FARMER is receiving a good many subscriptions from alliance people. This is as it ought to be, for we can be mutually serviceable to each other.

In the years past during all the special legislation the farmers have not asked for or received a single line of special legislation for their benefit, while monopolies of everything they use have grown, flourished and become strong, dictating their prices to the people. - Emporia Democrat.

We held our county alliance 18th inst., made up of the representative farmers of the county, and I am putting it very mildly indeed when I state that for general intelligence that body would not suffer by comparison with a like body from any of the other higher walks of life. - W. M. DRYDEN, Spring Creek, Chautauqua Co., Kas.

Berlin (Harper county) Alliance No. 313 was organized May 6, 1889. Officers elected for the ensuing year: President, J. H. Findley; Vice President, C. E. Pusey; Secretary, J. G. Carson; Treasurer, Mrs. M. E. Pusey; Chaplain, W. S. Parr; Lecturer, R. A. McGowen; Assistant Lecturer, Mrs. E. R. Hoopes; Outside Doorkeeper, C. Gard; Inside Doorkeeper, E. Gehring; Sergeant-at-Arms, C. C. Whitman; Purchasing Agent, A. Farmer. Berlin Alliance is in a fine growing condition, with a membership of forty-nine - males twenty-nine, females twenty. It is bound to be a very strong order. The alliances are forming all over Harper county.

Manufacturers throughout the country agree upon the prices at which to sell to jobbers. The jobbers agree upon prices at which to sell to retailers, and often the retailers agree upon prices at which to sell to consumers. If manufacturers and merchants could not make such agreements, or if they could not maintain them, half their number would go into bankruptcy in a decade. They would borrow themselves into the poorhouse. There is hardly an article of commerce to-day the capacity for the manufacture of which is not in excess of its consumption, and if manufacturers did not restrict consumption and fix prices, the business would be forever

demoralized, on account of the excessive competition, and stockholders would not receive a cent profit on their investments. It is a business necessity for manufacturers to limit the supply to the demand, and owing to disastrous competition it is a necessity to fix prices. For a Legislature to prevent these things is to drive manufacturers and capitalists outside of the State. - Secretary Euston, of the Collier White Lead Company, St. Louis, in a recent interview.

**THE MARKETS.**  
(JULY 20.)

Table with columns for GRAIN (Wheat, Corn) and LIVE STOCK (Beef Cattle, Fat Hogs, Sheep). Lists prices for various locations like New York, Chicago, St. Louis, and Kansas City.

**St. Louis Wool Market.**

KANSAS AND NEBRASKA - Medium, 21a22c; coarse, 18a20c; light fine, 19a21c; heavy fine, 15a17c; low and inferior, 13a16c.

NEBRASKA FARMS Good Improved Farms in Nebraska within the reach of all. Address for maps and particulars ARTHUR C. CROSSMAN, Investment Banker, Atkinson, Nebraska.

**SAFE INVESTMENT FARRAND & VOTEY ORGANS DETROIT, MICH. U.S.A.**

**WOOL! WESTERN WOOL COMMISSION CO. ST. LOUIS, MO.**

Consignments of Wool Solicited. Cash returns made within six days after receipt of wool. Liberal Advances made on Consignments. References: Dun's and Bradstreet's Agencies and Local Banks. Send for Circular and Price Current.

H. GIVEN HAGEY, FOUNT P. HAGEY, FOREST HAGEY, BEN M. HAGEY, THOS. J. HAGEY, LEWIS W. HAGEY.

**HAGEY BROTHERS,**

Successors to HAGEY & WILHELM,

**WOOL Commission Merchants,**

220 N. Commercial St., ST. LOUIS, MO.

General Agents for Cooper's Sheep Dip. References: - Boatmen's Bank, Dunn's Mercantile Agency, Bradstreet's Mercantile Agency. Full returns guaranteed inside of six days.

**W. B. WILHELM & CO.,**

**WOOL Commission Merchants.**

WOOL HIDES, FURS, SHEEP PELTS, ETC. CONSIGNMENTS SOLICITED.

W. B. WILHELM & CO., Formerly HAGEY & WILHELM, Wool Commission Merchants. 4 and 6 North Commercial St., ST. LOUIS, MO.

References: - Boatmen's Saving Bank, Dunn's Mercantile Agency, Bradstreet's Mercantile Agency.

**HOROZONE!**

The invariable destroyer of Hog Cholera and Swine Plague

A discovery in Nature, certainly killing the cholera poison, without destroying the animal. In genuine hog cholera, which is an infectious bacterial disease, HOROZONE and this poison life and growth cannot live together in the same animal ten minutes until HOROZONE attacks it, feeds on it, and within four days has consumed every remaining particle of it.

It is the only form of life on which HOROZONE has a fatal action.

The owners of HOROZONE have been for many years large raisers of hogs in the West, in connection with both cattle and dairy interests, and always finding medical skill of slight avail in hog cholera, and believing that somewhere Nature held a cure, have been searching for it till they found it. For one year it has been submitted to every test from Pennsylvania to Colorado, and has never yet lost a single case of genuine cholera, where given within four days of first sickness.

HOROZONE will not cure measles or anything but just what it claims to cure.

Many letters from merchants of high standing in the country, leading farmers and hog buyers describing what they actually saw HOROZONE accomplish, we have submitted to the editors of the KANSAS FARMER, and refer to them in corroboration for any statement made herewith. Free samples to breeders. Manufactured by THE HOROZONE COMPANY, General Office, 145 Broadway, New York.

Satisfactory terms will be made with responsible, energetic parties for local control and sale of HOROZONE.

**FRUIT QUEEN STEAM EVAPORATOR for Cook Stove. New, novel, perfect. THE ZIMMERMAN MACHINE CO., Cincinnati, Ohio.**

**BUGGY, ROAD-CART or HARNESS BARGAIN** If you want a Buggy, Road-Cart or Harness, write for our Exhibition offer, and see the BARGAIN we give regardless of cost, to advertise our goods. It will pay you. Send 6 cts. stamps for full information. UNION MACHINE CO., Philadelphia, Pa.

**JONES, HE PAYS THE FREIGHT.**

5-TON WAGON SCALES, \$60. BEAM BOX BRASS TARE BEAM. Freight Paid. Warranted for 5 Years. Agents Wanted. Send for Terms. FARMERS' Barn and Warehouse Scales. JONES OF BINGHAMTON, Binghamton, N. Y.

**CHICAGO Veterinary College.**

FOUNDED 1883. The most successful college of this continent. For further particulars address the Secretary, JOS. HUGHES, M. B. C. V. S., 2537-2539 State Street, Chicago, Ill.

**TIMKEN SPRING VEHICLES** Hundreds of thousands in use. Try One.

Image of a Timken Spring Vehicle. Greatly improved with spring shackles on one side. Easiest riding vehicle made. The springs lengthen and shorten according to the weight put on them. Adapted equally well to rough country or fine city drives. Will give you best satisfaction.

**SEDGWICK STEEL WIRE FENCE**

Image of Sedgwick Steel Wire Fence. Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or address, mentioning this paper, SEDGWICK BROS. Richmond, Ind.

Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or address, mentioning this paper, SEDGWICK BROS. Richmond, Ind.

THE STRAY LIST.

HOW TO POST A STRAY.

THE FINE, 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 complete description of said strays...

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 fails 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 an stray, must immediately advertise the same by posting three written notices in as many places in the township giving a correct description of each stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

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 JULY 10, 1889.

Johnson county—W. M. Adams, clerk.

HORSE—Taken up by John Marty, in Shawnee tp., P. O. Glenn, one gray horse, 15 1/4 hands high, weight 1,050 pounds, all four feet white, tall light color, forehead light, 7 years old, no marks or brands; valued at \$60.

HORSE—By same, one gray horse, 15 hands high, weight 1,050 pounds, scar on left hip near the rump, about six inches long, all his legs dark color; valued at \$60.

Shawnee county—D. N. Burdge, clerk.

COLT—Taken up by W. H. Oswalt, in Mission tp., June 24, 1889, one bay mare colt, 1 year old, left hind foot white, white on right foot, white spot in face; valued at \$20.

Geary county—P. V. Trovinger, clerk.

STEER—Taken up by Conrad Schmidt, in Junction City, June 4, 1889, one red steer, 2 years old, white spots on belly and right flank; valued at \$12.

HEIFER—By same, one red and white heifer, 2 years old; valued at \$12.

HEIFER—By same, one black and white heifer, 2 years old, right horn broken off; all three branded R on right hip; valued at \$12.

Leavenworth county—J. W. Niehaus, clerk.

2 MARES—Taken up by Thos. Mussett, in Kickapoo tp., (Missouri river bridge), May 18, 1889, two mares, one 15 hands high and the other 12; one bay, small white spots on one side, 4 years old, and the other black, white face, one hind foot white, 3 years old; one branded S.B. on left shoulder, injured in fetlock joints; one valued at \$35, other \$20.

FOR WEEK ENDING JULY 17, 1889.

Anderson county—S. Durall, clerk.

PONY—Taken up by T. A. Osborn, in Lincoln tp., June 19, 1889, one bay horse pony, sharp shod all round, about 10 years old, star in forehead, branded H on left shoulder and W on left side, unknown brand on left jaw, saddle marks; valued at \$35.

Wyandotte county—Frank Mapes, clerk.

MARE—Taken up by T. A. Bales, in Delaware tp., (P. O. Edwardsville), June 6, 1889, one sorrel mare, light mane and tail, blaze face, slit in right ear; valued at \$15.

HORSE—Taken up by C. F. Proebestel, in Shawnee tp., (P. O. Rosedale), June 15, 1889, one bay horse, blaze in face, left hip down, knot on left hind foot; valued at \$15.

Montgomery county—G. W. Fulmer, clerk.

MULE—Taken up by R. O. Lacy, in Drum Creek tp., June 5, 1889, one roan mare mule, 14 hands high, bad eyes, scar on left fore leg, 15 years old; valued at \$15.

Greenwood county—J. W. Kenner, clerk.

BULL—Taken up by George Felter, in Twin Groves tp., July 10, 1889, one red bull, 4 years old, white spot in forehead, three bars on right hip, horn partly broken.

FOR WEEK ENDING JULY 24, 1889.

Sherman county—O. H. Smith, clerk.

PONY—Taken up by Geo. W. Duff, in Union tp., June 17, 1889, one bay mare pony, weight 750 pounds, branded SS with bar above, both hind feet white, white on left front foot; valued at \$25.

Doniphan county—W. H. Fornbrook, clerk.

MARE—Taken up by Nic Reichenberger, in Wayne tp., P. O. Severance, July 3, 1889, one brown mare, about 3 years old, star in forehead, no other marks or brands visible.

2 COLTS—By same, two bay colts, 1 year old, star

in forehead, one has four white feet; three above animals valued at \$140.

Shawnee county—D. N. Burdge, clerk.

2 COLTS—Taken up by Samuel Short, in Soldier tp., P. O. North Topeka, June 3, 1889, two colts—a chestnut filly, 2 years old, bald face, and a gray horse colt, 1 year old, no marks or brands.

Greenwood county—J. W. Kenner, clerk.

MULE—Taken up by Henry E. Downing, in James ville tp., June 18, 1889, one dark iron-gray mule, 4 years old, weighs about 650 pounds, slit in left ear, mane and tail reached.

Greeley county—J. U. Brown, clerk.

PONY—Taken up by John Krebs, in Col ny tp., June 24, 1889, one dark mare pony, branded ON on left hip; valued at \$25.

PONY—By same, one bay mare pony with colt, white strip in face; valued at \$35.

MULE—By same, one light bay horse mule, had halter on, indescrivable brand; valued at \$40.

Notice to County Clerks!

We will regard it a personal favor if each County Clerk will mail us, at the first opportunity, a complete list of breeders (with their postoffice addresses) of thoroughbred horses, cattle, swine, sheep and poultry; also the name and location of every creamery and manufactory in his county. When we have a complete list we will favor you with the directory for the State. KANSAS FARMER CO. Topeka, Kas.

HENRY W. ROBY, M. D., C. F. MENNINGER, M. D., Surgeons.

118 WEST SIXTH AVENUE, TOPEKA, KANSAS.

J. P. LEWIS, M. D., 519 KANSAS AVENUE, TOPEKA, - - - KANSAS.

Special attention given to General Orthopedic and Gynecological Surgery. OFFICE HOURS—10 to 12 a. m., and 2 to 4 p. m.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA Commercial Security Co.,

307 Kansas Avenue, Topeka.

Six to twelve months loans at current rates. Approved stock sale notes bought. Correspondence solicited.

TOPEKA BUSINESS COLLEGE SHORTHAND SYSTEM 521 & 523 QUINCY ST. E.E. ROUDEBUSH, BUSINESS MANAGER. TOPEKA, KANSAS. Send for Catalogue and College Journal.

HALL & O'DONALD LITHOGRAPHING CO., Lithographers, Printers and Blank Book Manufacturers.

A full line of Conveyancing and Justices Blanks in stock. Lithograph Bonds and Certificates of stock a specialty. Stock Catalogues got out on short notice. Write for samples and prices. 110 and 112 EAST EIGHTH AVE., TOPEKA, KAS.

THE ANGLO-KANSAN LAND INVESTMENT CO. ROOM 22 KNOX BUILDING, 114 W. SIXTH ST., TOPEKA, KAS. Improved and Unimproved Lands in Eastern and Central Kansas bought and sold. We invite the particular attention of all whose circumstances are such that they MUST SELL FOR CASH within the coming six months. Quick sales assured if prices named are bargains. Send us full description and plat of farm. Must have exclusive sale for four months. C. R. SMITH, Secretary. EUROPEAN OFFICES--LIVERPOOL AND LONDON.

- PATENTS - Obtained in the United States, Canada, and all foreign countries. Official Gazette of the Patent Office received weekly, and all Patent Laws on hand and free for consultation to clients. The largest and best selected Patent Library west of Washington, D. C., embracing a complete list of all patents issued from the organization of the office, 1790, to the present time. Rejected Cases, Appeals, Re-issues, Caveats, Assignments, Forfeited Cases, Design Patents, Trade Marks, Labels, Copyrights, Interferences and Infringements attended to with skill and fidelity, by JAMES G. YOUNG, ATTORNEY AT LAW, NOTARY PUBLIC, SOLICITOR OF PATENTS, and UNITED STATES CLAIM AGENT, Office, Rooms 62, 63 and 64 Hall Building, 9th and Walnut Streets, Kansas City, Mo. Telephone 1849.

JOHN W. CAUGHEY. FINE DESIGNING AND ENGRAVING, HORSES; CATTLE; SHEEP; HOGS & POULTRY A SPECIALTY. Send for samples of Electrotype, we have for sale. Nothing sells stock as quickly as a fine cut. 49 FIFTH AVENUE, PITTSBURGH, PA. ENGRAVING for Stockmen, Manufacturers and all who require cuts. A fine line of Electrotype of Horses, Cattle, Sheep, Hogs and Poultry for sale. Send stamp for samples. We have the best and cheapest. Send for prices.

REPORT OF THE CONDITION OF The Kansas National Bank, OF TOPEKA, At Topeka, in the State of Kansas, at close of business, July 12, 1889, [condensed]: RESOURCES. Loans and discounts.....\$785,024.15 United States bonds and premiums..... 53,500.00 Real estate, furniture and fixtures..... 4,381.43 Current expenses and taxes paid..... 1,591.86 Cash and exchange..... 100,385.91 Redemption fund with United States Treasurer (5 per cent. of circulation)..... 2,250.00 Total.....\$897,033.35 LIABILITIES. Capital stock paid in.....\$500,000.00 Surplus fund..... 20,000.00 Undivided profits..... 2,734.67 National bank notes outstanding..... 45,000.00 Deposits..... 279,298.63 Notes and bills re-discounted..... 50,000.00 Total.....\$897,033.35 STATE OF KANSAS, COUNTY OF SHAWNEE, ss. I, R. M. Crane, Cashier of the above named bank, do solemnly swear that the above statement is true, to the best of my knowledge and belief. R. M. CRANE, Cashier. Subscribed and sworn to before me this 20th day of [SEAL] July, 1889. L. W. WILSON, Notary Public. Correct—A'te t: O. E. WALKER, S. L. LEAVITT, SAM'L T. HOWE, Directors.

The Western School Journal, TOPEKA, KANSAS. OFFICE STATE DEPT. OF PUBLIC INSTRUCTION, TOPEKA, KAS., January 16, 1889. To County Superintendents:—I have this day designated the Western School Journal as the official organ of this department, through which medium, by agreement with the editor of the Journal, I shall in each issue reach Superintendents, teachers and many school officers. This designation is complete evidence of my confidence that the Journal can be safely indorsed by Superintendents as a paper which should be in the hands of every teacher. Very respectfully yours, GEO. W. WINANS, State Supt. Public Instruction. The Western School Journal publishes monthly all the opinions and decisions of the State Superintendent, Attorney General, and Supreme Court on questions relating to our schools. These opinions and decisions will be worth much more than the cost of the Journal to any school officer. According to an opinion given by the Attorney General, school officers have the power to subscribe for an educational journal and pay for it out of the district funds. Our regular rate is \$1.25 a year, but to district boards, if three copies be taken, we can make the rate \$1.00. Please remit by money order, postal note, or registered district order. Address WESTERN SCHOOL JOURNAL, Topeka, Kansas. We can send the Journal and KANSAS FARMER one year for \$1.90; three subscriptions to the Journal and one to the FARMER for \$3.70.

TOPEKA Investment & Loan Co. TOPEKA, KANSAS. FARM LOANS A SPECIALTY Low rates of Interest. Money paid when papers are accepted. Write for terms.

YOUNG AND MIDDLE AGED MEN Suffering from the effects of Youthful Follies, Indiscretion, Excess of Indulgence, producing Nervousness, Debility, Dimness of Sight, Self Distrust, Failing Memory, Physical Decay, Pimples on Face, Aversion to Society, Loss of Ambition, Unfitness to Marry, Dyspepsia, Stunted Development, Pains in Back, Milky Urine, Night Losses, Unnatural Drains and Lost Manhood, you can be CURED to STAY CURED. Relief at once, all exhausting drains stopped, weak parts strengthened and enlarged. Treatment tested 32 years and in thousands of cases, Send stamp for Question List No. 1, in plain envelope. Add JAMES WHITTIER, M. D., 215 W. Ninth St., KANSAS CITY, MO. In writing to advertisers, please mention the KANSAS FARMER.

W. T. DOYLE, MARYVILLE, MO.

Breeder of choicest strains of POLAND-CHINA swine. 150 pigs by such noted boars as Bravo C. 267 (S), Spartacus 8089 (A), Maryville's Best 2821 (S), Keno 524 (S), and Goldust 1st 1980 (S), and out of sows, all of gilt-edge breeding. Special express rates. Inspection invited and correspondence promptly answered.

MAPLE GROVE HERD

WM. PLUMMER, breeder and shipper of POLAND-CHINA SWINE and Light Brahma Fowls of the best strains. 25 choice sows bred to three first-class boars for the season's trade. Young stock for sale, and eggs in season. Farm three and a half miles southwest of Osage City, Kas.

MAINS' Fountain Head and Storm Cloud Claim this Space. Mains' Herd of Pure-bred POLAND-CHINA HOGS, of as fashionable strains as can be had. All recorded in the Ohio Poland-China Record. Fall pigs of both sexes and spring sows bred and to breed for sale. A large selected herd of sows (most of which were bought in Ohio) new bred for season of 1889 to No. 1 boars of as good royal breeding as there is in the country. JAMES MAINS, Address Oskaloosa, Jefferson Co., Kas.

HIGHLAND HERD POLAND-CHINAS

Deltrich & Gentry, Ottawa, Kas. Such strains as Corwin, Give or Take, Hoosier Tom, Duchess, Riverside Beauty, Lady Maid, I. X. L. and others represented. 75 pigs from 6 boars. Orders booked now for spring pigs. Correspondence answered promptly. Mention KANSAS FARMER.

THE GOLDEN BELT HERD OF Thoroughbred Poland-Chinas

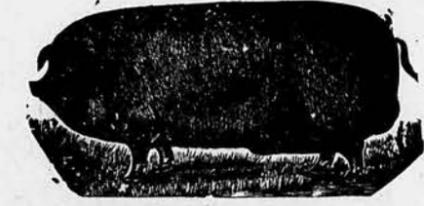
Two hundred and fifty choice Spring Pigs now ready to ship, at prices lower than ever. Order now, and secure selections from either sex, or pairs, trios, or small herds, not akin. Stock shipped from here over either the A., T. & S. F., Mo. Pacific or St. Louis & San Francisco R. R. All breeders registered in American P.-C. Record. Pedigree with each sale. F. W. TRUEDELL, Lyons, Kas.

JACKVILLE HERD OF POLAND-CHINAS

J. S. RISK, Prop'r, WESTON, MO. I have a fine lot of early pigs farrowed January and March. I can furnish very choice pigs not akin. Pigs sired by six different boars. Write for prices or call and see stock.

Rome Park Stock Farm

T. A. HUBBARD, Rome, Sumner Co., Kansas.



Show yard of Poland-Chinas and Large English Berkshires. I am breeding the best and leading strains, including Gracefuls, U. S., Black Bess, I. X. L., Corwins, Sallies, Bella Donnas, Duchess, Dukes and Champions. The best of blood, with extra size and individual merit. Write or come and see me. Two hundred pigs for sale. Am using thirteen extra good boars.

SELECT HERD OF LARGE BERKSHIRES

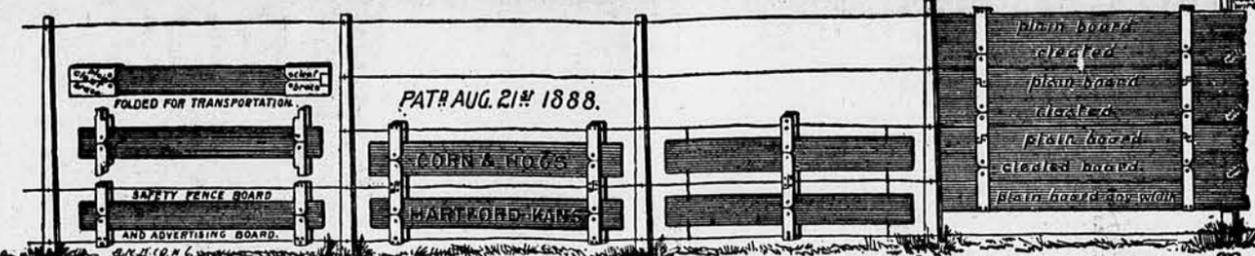
Of the Royal Duchess, Sallie, Hillside Belle, Charmer, Stumpy, Fashion, Queen Betsy, and other families of fine, large, fleshy qualities, with such top breeding as British Champion, Longfellow and Sovereign Duke, and the noted young show boar PERIZES 1884 at head of herd, the property of G. W. BERRY, Berryton, Shawnee Co., Kas. Located on the K., N. & D. R. R., nine miles southeast of Topeka. Farm adjoins station. Write for prices and free catalogue. Orders taken now for spring pigs from show sows.

ENGLISH BERKSHIRES.



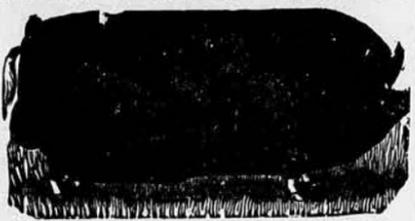
THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE 4889, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chicks. Your patronage solicited. Write. M. B. KEAGY, Lock Box 784, Wellington, Kas.

HARDEN'S SAFETY FENCE AND ADVERTISING BOARD.



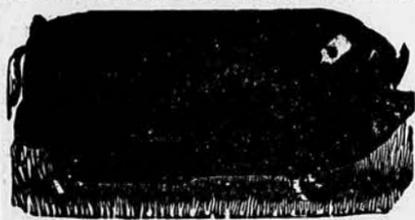
This engraving only shows part of its forms of application. A hatchet, saw, square, brace and bit, and wire nails only are needed in its construction. It is at once economical, complete, easily made, taken down and folded up, and can be put on fence again or stored away, being always ready for use. Whenever it is desired to use these improved attachments in a particular field, they can be applied, and then afterwards changed to another field, so that a farmer having enough for eighty rods of fence can, as circumstances require, practically have his whole farm hog-tight. Circulars free. Agents wanted in every county in the United States. Send one dollar (\$1), with numbers of your land-section, township, range, etc., and receive deed to one farm right. This offer is made for a short time only to introduce it in your neighborhood. As soon as a company is formed and our Agents are at work the price will be \$5 for each Farm Right. W. I. F. HARDEN, Box 1, Hartford, Kas.

The Echo Herd.



For Registered Prize-winning BERKSHIRE SWINE AND SOUTHDOWN SHEEP or money refunded. Come and see or address J. M. & F. A. SCOTT, Huntsville, Randolph Co., Mo. Mention Kansas Farmer.

PLEASANT VALLEY HERD OF 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.

Ohio IMPROVED Chesters WARRANTED CHOLERA PROOF. EXPRESS PREPAID. WINS 1st PRIZES IN U. S. & FOREIGN COUNTRIES. 2 WEIGHED 2803 LBS. SEND FOR DESCRIPTION & PRICE OF THESE FAMOUS HOGS, ALSO FOWLS L. B. SILVER CO. CLEVELAND, O. (This Company sold 973 head for breeding purposes in 1887. Send for facts and mention this paper.)

Holstein - Friesian Cattle.

I have a choice herd of these justly-celebrated cattle of all ages. Also some nice grades, for sale at reasonable prices. Personal inspection invited. Call on or address JNO. D. PRYOR, Winfield, Cowley Co., Kas.

HOLSTEIN PARK.



WM. A. TRAVIS & SON, North Topeka, Kas., breeders of the best strains of HOLSTEIN-FRIESIAN CATTLE. Five registered young bulls for sale cheap on easy terms, from 1 month to 2 years old, and other sex when wanted.

SHANNON HILL STOCK FARM.

GLICK & DEVIN, Atchison, Kansas, Breed and have for sale Bates and Bates-topped SHORT - HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane, and other fashionable families. The grand Bates bulls Imp. 8th Duke of Kirklevington No. 41798 and Waterloo Duke of Shannon Hill No. 89879 at head of herd. Choice young bulls for sale now. Correspondence and inspection of herd solicited, as we have just what you want and at fair prices. Address LUTHER DEVIN, Manager, Atchison, Kansas.

Humphrey's Veterinary Specifics, Condition Powders, and all Drugs, Lubricants Oils of all kinds. One of the best places to get these is of H. M. WASHBURN, Druggist, 823 Kansas Ave., Topeka, Kas.

MORGAN HORSES Western Headquaters for Stallions of high breeding, and Grade Fillies. DR. A. W. HINMAN, Dundee, Ill.

E. Bennett & Son,

TOPEKA, - KANSAS,

The Leading Western Importers of CLYDESDALE, PERCHERON, CLEVELAND BAY

French Coach Horses.

AN IMPORTATION OF 125 HEAD, Selected by a member of the firm, just received.

Terms to Suit Purchasers. Send for illustrated catalogue. Stables in town. E. BENNETT & SON.



30 HORSES CHAMPION PRIZE-WINNING STUD OF THE WEST. 70 PRIZES RIX & GOODENOUGH, TOPEKA, KANSAS,

IMPORTERS AND BREEDERS OF PERCHERONS, CLYDES, SHIRES AND CLEVELAND BAYS.

GOOD HORSES, LONG TIME, LOW INTEREST, MODERATE PRICES. No other firm in America sells to stock companies under the same perfected system that we do, which insures to companies square dealing, successful breeders and absolute success. Illustrated catalogue free. Farm and Stables—Two miles east of Highland Park, TOPEKA, KANSAS.

Champion Gold Medal Stud.

250 CLEVELAND BAYS AND ENGLISH SHIRES!

Of the highest breeding and most popular strains. We carry a large stock of young, vigorous stallions and mares at all seasons, imported young and matured on our farms, thus fully acclimated, and sure breeders. Prices low and terms easy. 150 HOLSTEIN-FRIESIANS at exceptionally low prices. Grand opportunity to secure foundation stock at low figures. Send for Illustrated Descriptive Pamphlet. Mention this paper. GEO. E. BROWN & CO., AURORA, ILL.

IMPORTERS AND BREEDERS OF ENGLISH SHIRE AND SUFFOLK PUNCH HORSES



STERLING. 4713.

RED POLLED CATTLE.

We have on hand a very choice collection, including a recent importation of horses, several of which have won many prizes in England, which is a special guarantee of their soundness and superiority of form and action. Our stock is selected with great care by G. M. SEXTON, Auctioneer to the Shire Horse Society of England. Prices low, terms easy, and horses recorded in respective stud books and guaranteed. SEXTON, WARREN & OFFORD, Maple Hill, Kansas.



Peter Piper (717).

Walnut Grove Stock Farm

Western Headquarters for ENGLISH SHIRE Stallions and Mares and HEREFORD Cattle. These animals have been selected with the greatest care by ourselves from the most noted studs and herds, both in England and this country. Any one wishing first-class animals should give us a call. Terms favorable and prices low. Will trade for steers. Farm two and a half miles northeast of town and 100 miles west of Topeka on Santa Fe railroad. Write for particulars to MAKIN BROS., Florence, Marion Co., Kas.

RUPTURE--RUPTURE

A new and sure method for the relief and cure of rupture. Every case guaranteed. Recommended by leading physicians and hundreds of patients from all parts of the Union as far superior to all other methods of treatment. Patient is made comfortable and strengthened for work at once, and an early and permanent cure assured. No operation, pain or hindrance. Send 10 cents in stamps for 96-page pamphlet on Rupture and its Treatment, with numerous statements from physicians and patients. DR. D. L. SNEDIKER, 511 Commercial St., Emporia, Kas.

Tutt's Pills

stimulates the torpid liver, strengthens the digestive organs, regulates the bowels, and are unequalled as an ANTI-BILIOUS MEDICINE.

In malarial districts their virtues are widely recognized, as they possess peculiar properties in freeing the system from that poison. Elegantly sugar coated. Dose small. Price, 25cts.

Sold Everywhere. Office, 44 Murray St., New York.

IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice limestone soil; abundance of pure water; a delightful climate all the year; almost continuous sunshine; altitude 3,500 feet; healthiest locality in the U. S., no consumption, no malaria. 30 acres will yield a competency. Write for particulars, naming this paper, to Pecos Irrigation & Investment Co., 84 Monroe St., Chicago, Ill.

# CIDER PRESSES

Send for Catalogue to C. H. STEWART, 121 W. Washington St., Chicago, Ill.

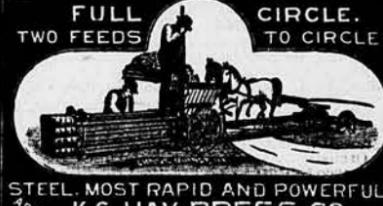
No good Windmill can be manufactured and sold for

## LESS MONEY

than we are now selling this Mill. Write for circulars containing full descriptions. PEABODY MANUFACTURING CO., Peabody, Kansas.

**LIGHTNING HAY PRESS**

FULL TWO FEEDS TO CIRCLE



STEEL, MOST RAPID AND POWERFUL

K.C. HAY PRESS CO. KANSAS CITY, MO.

**KIRKWOOD'S WROUGHT IRON WIND ENGINE**

15 THE BEST IN THE WORLD



sun cannot shrink it, and the wind cannot shake the wings out. Send for prices and catalogue. KIRKWOOD MANUFACTURING CO., Arkansas City, Kansas.

**WARRANTED** not to blow down off the tower, and that our Geared Wind Mills have double the power of all other mills. Mfrs. of Tanks, Wind Mill supplies, and the Celebrated



**CHALLENGE** Feed Grinders, HORSE POWERS, CORN SHELLERS, PUMPS and BRASS CYLINDERS. ALWAYS BUY the BEST. Good AGENTS WANTED. CHALLENGE WIND MILL & FEED MILL CO., BATAVIA, KANE CO., ILL.

## The Perkins Windmill.

Save Money. Buy the Best

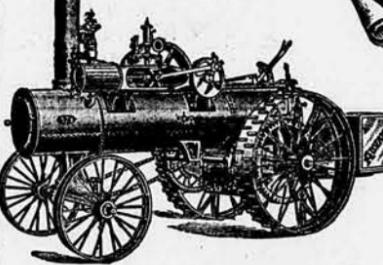


It has been in constant use for nineteen years, with a record equaled by none for simplicity, durability and power. Made of the best material and by skilled workmen. We manufacture both Pumping and Geared Mills and carry a full line of Windmill supplies. Send for catalogue, circular and prices. Address PERKINS WINDMILL & AX CO. MISHAWAKA, IND.

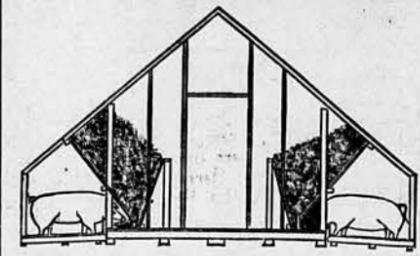
**ADVANCE**

**THRESHERS AND ENGINES**

Manufactured by the ADVANCE THRESHER CO., Factory and Main office, Battle Creek, Mich. Write for full information to the factory, or to KANSAS CITY, MO.




## The Hog Sanitarium



[Patented Oct. 9, 1888, by a practical feeder.]

For Saving Feed and Work and Protecting Hogs from Disease.

A Granary and Automatic Feeder Combined, to be erected in the Feed Yard. Will store 900 bushels of corn; feed 150 head of hogs. Any farmer can build it.

For feeding laxative and nitrogenous food, such as Bran, Ground Rye, Ground Oil Cake, Shorts, etc., with Corn, shelled or ground, dry, and without waste; also for feeding salt at all times, thoroughly mixed through the feed. Warranted, when properly used, to save at least 20 per cent. of the feed as usually fed. Not by the direct saving alone, but mostly by reason of increased thrift and rapid and even fattening. Will require for construction about 2,000 feet of lumber and 3,000 shingles for feeder of regulation size. Can be built of less capacity and added to at any time to suit the farmer's needs.

The use of this feeder with a proper supply of nitrogenous and laxative food with corn, will in two weeks' time place the most unthrifty hogs in good condition, if not already infected with cholera. It is the greatest safeguard against cholera. Sanitarium hogs eat regularly and often; never overeat. No mud or filth to consume; all work and waste practically dispensed with.

The use of shelled corn or meal in the Sanitarium is not half the trouble it is to feed ear corn. Keeps the yard free from litter; gives all hogs in the yard the same chance to thrive, all having equal access to feeder. When you see your corn trampled in the mud and filth you feel like kicking yourself. When you witness hogs eating from the Sanitarium in a muddy time you smile; so do the hogs. You do not hesitate to provide for the comfort of other farm animals; why neglect the hog? He brings a quicker and better return for money invested than any other animal. Protect his health and feed him properly and he will be more remunerative to you. I furnish Permits with full instructions about building and operating Sanitarium on one quarter section or less tract of land, for \$10.00.

If, after thorough trial the Sanitarium fails to give satisfaction, the amount paid me for permit will be refunded, as per proposition in circular. In all cases when making application for a permit (farm right) send name, quarter section, township and range correctly.

Applications must be accompanied with cash or draft, and can be made direct by mail or through regularly authorized agents. Parties holding permits are entitled to plans for both portable and regulation size. Permits to first application in a township at one-half the regular rate (\$5.00), and feeder to be built within sixty days.

Territory not for sale, but farm rights will be held so as to be within the reach of all. Send for circulars, giving full description and plan of operation.

E. M. CRUMMER, Patentee and Owner, BELLEVILLE, KAS.

**WELL DRILLS** for all purposes. Send 30cts. for mailing catalogues with full particulars. CARPENTER ST. AND GARROLL AVE. CHICAGO, ILL.



**UNION PACIFIC** Tickets ON SALE TO ALL PRINCIPAL POINTS EAST, WEST, NORTH and SOUTH



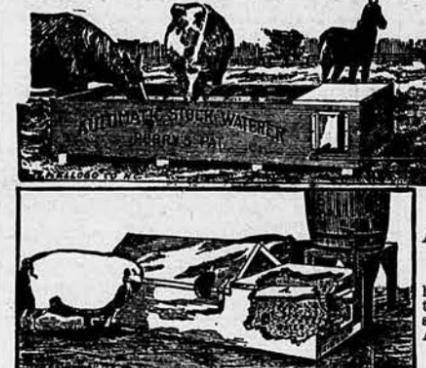
**STATE LINE** To Glasgow, Belfast, Dublin and Liverpool FROM NEW YORK EVERY THURSDAY. Cabin passage \$35 to \$50, according to location of stateroom. Excursion \$65 to \$90. Steerage to and from Europe at Lowest Rates. AUSTIN RALDWIN & CO., General Agents, 53 Broadway, New York. JNO. BLEGEN, Gen'l Western Agent, 164 Randolph St., Chicago. ROWLEY BROS., Agents at Topeka.

**FAT FOLKS** using "Anti-Corpulence Pills" lose 15 lbs. a month. They cause no sickness, contain no poison and never fail. Particulars (sealed) 4c. W. H. Cox Specific Co., Phila., Pa.

THE CELEBRATED Special **ENSILAGE** and FODDER **ROSS** CUTTERS, CARRIERS and POWERS. THE FINEST AND LARGEST LINE OF FODDER CUTTING MACHINERY IN THE WORLD. Better made. Stronger, more Durable, and will cut faster with less power than any other Cutter manufactured. Send for our Illustrated Catalogue and Treatise on Ensilage and Silos. Address **E. W. ROSS & CO.,** MANUFACTURERS, SPRINGFIELD, OHIO, U. S. A.



**AN ENTIRELY NEW DEVICE.** An Automatic or Self-Regulating Stock Waterer. Can be attached to barrel, tank or pond. Keeps on hand a constant and regular supply of water. One tank or trough especially for hogs. For detailed description send for circular. Correspondence solicited. Agents wanted. Territory for sale. Manufactured by **PERRY & HART,** P. O. Box 391, Abilene, Kansas.



**BUCKEYE** PERFECT FORCE FEED **GRAIN DRILL** FOR Grain and Grass Seed **CENTER GEAR.** Ratchets in ground Wheel, so that either wheel drives the Grain Feed, making continuous feed in turning corners or drilling around corn shocks. **New LEVER** for shifting the **HOES.** One-half the hoes forward and the other half back. This drill has no equal on the market and can not fall to be appreciated by any farmer who sees it. Branch Houses: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal. Send for Circular to either of the above firms or to **P. P. MAST & CO.,** SPRINGFIELD, OHIO. Established 1854



**CONSIGN YOUR CATTLE, HOGS & SHEEP TO Larimer, Smith & Bridgeford,** LIVE STOCK COMMISSION MERCHANTS, Kansas City Stock Yards, Kansas City, Kansas. Highest market prices realized and satisfaction guaranteed. Market reports furnished free to shippers and feeders. Correspondence solicited. Reference:—The National Bank of Commerce, Kansas City.

**EVANS-SNIDER-BUEL CO.,** (INCORPORATED) SUCCESSOR TO HUNTER, EVANS & CO. CAPITAL STOCK, - - - \$200,000. **KANSAS CITY STOCK YARDS,** 17 YEARS' ACTIVE EXPERIENCE in Live Stock Commission Business, Market Reports regular and special, and all other information incident to the business, will be furnished FREE by each house. **UNION STOCK YARDS,** CHICAGO, ILL. Correspondence always has prompt attention. DIRECTORS: A. G. EVANS, President. M. P. BUEL, Vice President. C. A. SNIDER, Treasurer. A. T. ATWATER, Secretary. F. W. FLATO, Jr. IKE T. PRYOR.

**LIVE STOCK COMMISSION MERCHANTS.** **The Kansas City Stock Yards.** 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. They are planked throughout, no yards are better watered, and in none is there a better system of drainage. The fact that higher prices are realized here than in the East is due to the location at these yards of eight packing houses, with an aggregate daily capacity of 3,300 cattle and 27,200 hogs, and the regular attendance of sharp, competitive buyers for the packing houses of Omaha, Chicago, St. Louis, Indianapolis, Cincinnati, New York and Boston. All the sixteen roads running into Kansas City have direct connection with the yards, affording the best accommodation for stock coming from the great grazing grounds of all the Western States and Territories, and also for stock destined for Eastern markets. The business of the yards is done systematically and with the utmost promptness, so there is 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 Co. Horse and Mule Market.** FRANK E. SHORT. | FRANK E. SHORT & CO., Managers. | CAPT. W. S. TOUGH. 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 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. J. F. MORSE, General Manager. E. E. RICHARDSON, Treasurer and Secretary. H. P. CHILD, Superintendent.

**- CANCER! -** The only institution in the world where Cancers and Malignant Tumors are permanently removed without using knife, ligature or caustics, and in all cases a permanent Cure is guaranteed. Consultation free. Call or address **KOEHLER CANCER HOSPITAL CO.,** 1430 Grand Ave., Kansas City, Mo.

**LEATHER TOP** DIRECT TO CONSUMER. SAVING 25 TO 40%. NO MIDDLEMENS PROFITS NOR EXPENSES OF TRAVELING MEN. CATALOGUE & FREIGHT CHARGE TO YOUR PLACE ON APPLICATION. **PIONEER BUGGY** COLUMBUS, O.



BREEDERS' DIRECTORY.

Cards of four lines or less, will be inserted in the Breeders' Directory for \$15.00 per year, or \$5.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

NORRIS & CLARK, of Malden and LaMotte, Ill., are going to close out their entire stud of imported Clydesdale and Shire horses—ninety-two head—at bottom prices. Send for catalogue.

PROSPECT FARM.—H. W. McAfee, Topeka, Kas., breeder of Thoroughbred CLYDESDALE HORSES for sale now. Write or call.

M. D. COVELL, Wellington, Kas., breeder of Registered Percherons. Acclimated animals, all ages and sexes. At head of stud, Theophile 2796 (3746), black, imported by M. W. Dunham, and sired by his celebrated Brilliant 1271 (755).

CATTLE.

MAYES & COXE, Peabody, Kas., breeders of pure-bred HEREFORD cattle. Horace Wilton (29186), grand sire of Lord Wilton, at the head of herd. Young bulls and heifers for sale. Write or come and see.

M. E. MOORE, Cameron, Mo., breeder of pure-bred HOLSTEIN-FRIESIAN CATTLE ONLY. The home of Gerben 4th, who has a butter record of thirty-two pounds in seven days.

GEO. M. KELLAM & SON, Richland, Shawnee Co., Kas., breeders of Galloway Cattle and Hambletonian and Morgan Horses.

THOS. J. HIGGINS, Council Grove, Kas., breeder of pure-bred Hereford Cattle. Choice young bulls and heifers rich in Wilton, Grove 3d and Anxiety blood for sale at reasonable prices. Correspondence and inspection solicited.

A. BE BOURQUIN, Nekoma, Illinois, Breeder of BROWN SWISS CATTLE.

NORWOOD HERD OF SHORT-HORN CATTLE, Y. R. Ellis, proprietor, Gardner, Johnson Co., Kas. Herd is headed by Baron Bigstaff No. 84476, a pure-blood Rose of Sharon. Stock of both sexes for sale.

JOHN P. HALL, HOLSTEIN-FRIESIAN CATTLE, EMPORIA, KANSAS

ENGLISH RED POLLED CATTLE.—Young Bulls for sale, pure-bloods and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Greene Co., Mo. [Mention Kansas Farmer.]

VALLEY GROVE HERD OF SHORT-HORNS.—For sale choice young bulls and heifers at reasonable prices. The extra fine Cruickshank bull Earl of Gloster 74523 heads the herd. Call on or address Thos. P. Babst, Dover, Kas.

L. A. KNAPP, BREEDER, } SHORT-HORN CATTLE } and BUFF COCHIN POULTRY } FOR SALE.

JERSEY CATTLE—A. J. 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.

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.

EARLY DAWN HERFORD HERD.—Apply to owner, George Howler, Kansas City, or to foreman, G. I. Moyer, Maple Hill, Kas.

W. E. GOULD, MARSHALL, Mo., breeder of Thoroughbred and Grade Holstein-Friesian Cattle. Calumet 5522 H. H. B., heads herd—a choice butter-bred Netherland bull. Stock for sale.

W. M. BROWN, LAWRENCE, Kas., breeder of Holstein-Friesian and Jersey Cattle of noted families. Correspondence solicited.

D. B. W. H. E. CUNDIFF, Pleasant Hill, Mo., proprietor of Altamahd Herd and breeder of fashionable Short-horns. Straight Rose of Sharon bull at head of herd. Fine show bulls and other stock for sale.

OKWOOD HERD OF SHORT-HORN CATTLE.—All recorded. Choice-bred animals for sale. Prices low. Terms easy. Imported Earl of Gloster 74522 heads herd. C. S. Eichkoltz & Son, Wichita, Kas.

C. E. DAVIS, WELLINGTON, SUMNER CO., KANSAS, breeder of A. J. C. C. Jerseys from the greatest prepotent butter families. Bull calves for sale or trade for heifer calves. I am also a breeder of STANDARD-BRED registered mares and horses. Correspondence solicited. Mention KANSAS FARMER.

CATTLE AND SWINE.

C. H. SEARLE, Edgar, Clay Co., Nebraska, breeder of Thoroughbred Holstein-Friesian cattle and Duroc-Jersey and Poland-China swine. Breeders recorded. Farm one mile west of town.

SAVED—By getting my prices before buying SHORT-HORN CATTLE and POLAND-CHINA HOGS. Good individuals and pedigrees. PLYMOUTH ROCK fowls of most noted strains. Eggs \$1 per thirteen. C. M. T. HULBERT, Edgerton, Johnson Co., Kansas.

JOHN LEWIS, MIAMI, Mo., breeder of Short-horn Cattle, Poland-China Hogs, Cotswold Sheep, Light Brahms and Bantam Chickens, Bronze Turkeys, Peafowls, Pekin Ducks and White Guineas. Young stock for sale. Eggs in season.

M. H. ALBERTY, Cherokee, Kas., breeder of Registered Holstein-Friesian cattle and Poland China swine.

J. J. MAJLS, Manhattan, Kas., breeder of Short-horn cattle, Berkshire and Poland-China hogs. Fine young stock of both sexes for sale. Examination or correspondence always welcome.

J. L. TAYLOR & SON—Englewood Stock Farm, Lawrence, Kas., breeders of Holstein-Friesian Cattle and Poland-China Hogs. Stock for sale. Terms easy.

HILLSIDE STOCK FARM.—W. W. Waltmire, Carbondale, Kas., importer and breeder of CHESTER WHITE swine and Short-horns. Pigs for sale now.

A. B. DILLE & SON, Edgerton, Kas., breeders of choice Poland-China hogs, Short-horn cattle and thoroughbred Poultry. Choice young bulls and boars for sale cheap.

SWINE.

Z. D. SMITH, Greenleaf, Kas., breeder and shipper of fine Poland-China Swine. Also Jayhawk strain of Plymouth Rock Fowls. Write for prices.

THE GOLD DUST HERD OF POLAND-CHINAS. Established 1880. Are premium hogs of very best strain. They please visitor's eye. Stock, both sexes, for sale, and a few choice sows bred. Your patronage solicited. Address J. M. McKee, Wellington, Kansas. Also Fancy Poultry.

SWINE.

MAHAN & BOYS, Malcolm, Nebraska, breeders of pure Essex Swine.

JOHN BUCHE, breeder of Poland-China Swine. Stock of all ages for sale. Young pigs ready to ship May 1st. Pleasant View Farm, Miltonvale, Kas.

KAW VALLEY HERD POLAND-CHINAS.—Tat's Sample at head. All breeders fine individuals. Also fancy poultry. Inspection invited. Correspondence promptly answered. M. F. Tatman, Rossville, Kas.

LONGVIEW HERD OF POLAND-CHINAS. Pigs of either sex for sale at all seasons. All breeders recorded. Correspondence promptly answered. Walter Ferguson, Valley Falls, Kas.

THE PIONEER HERD—Of Pure Duroc-Jersey Swine, Partridge Cochins and Slate Turkeys. A. Ingram, proprietor, Ferry, Pike Co., Ill. Showed at seven fairs in 1888 and won 60 premiums. Orders promptly filled.

SCOTT FISHER, Holden, Mo., breeder of the very best strains of Poland-Chinas. Pigs from five noted boars. Can furnish small herds not akin. Sell nothing but first-class stock. Over 100 pigs for this season's trade. Write me and mention this paper.

V. B. HOWEY, Box 103, Topeka, Kansas, breeder of Thoroughbred Poland-China and English Berkshire swine. Stock for sale. Also fancy poultry eggs: \$1.25 for 13; \$2 for 26.

POLAND-CHINA SWINE.—From No. 1 breeding stock. All stock recorded or eligible to record. Personal inspection solicited. Correspondence promptly answered. Satisfaction guaranteed. Henry H. Miller, Rossville, Kas.

THOS. C. TAYLOR, Green City, Mo., breeds best strains of Poland-China pigs; also Langshan fowls. Write for prices of pigs and eggs.

PEDIGREED POLAND-CHINAS.—At prices that will sell them. Well loaded with Corwin blood and other popular strains. Marion Brown, Nortonville, Kas.

SHEEP.

SHROPSHIRE DOWNS.—Ed. Jones, Wakefield, Clay Co., Kas., breeder and importer of Shropshire Down, has the best lot of Shropshires west of the Missouri river. For sale cheap.

POULTRY.

SHAWNEE POULTRY YARDS—Jno. G. Hewitt, Prop'r, Topeka, Kas., breeder of leading varieties of Poultry, Pigeons and Rabbits. Wyandottes and P. Cochins a specialty. Eggs and fowls for sale.

MRS. A. B. DILLE, Edgerton, Kas., breeder and shipper of the finest strains of Plymouth Rocks, Wyandottes, Brown Leghorns and Mammoth Bronze Turkeys. Stock for sale, and eggs at \$1 per thirteen, \$2 for thirty. Turkey eggs at \$2 per eleven.

KANSAS POULTRY YARDS.—Fifteen eggs for \$2 from Silver Wyandotte, Plymouth Rocks and Light Brahmas. Stock strictly first-class. J. H. Stimmer, Abilene, Kas.

1880. MRS. EMMA PROSIUS, TOPEKA, KANSAS. 1889. Established in 1880. Four miles southwest of city. Breeder and shipper of highest class fancy poultry. Eggs—Light Brahms, \$3 per 13, \$5 per 26; Silver Wyandotte, \$2.50 per 13, \$5 per 26; Pekin duck, \$1.50 per 13, \$3 per 26; M. Bronze turkey, \$3 per 9. Breeders first class in every respect.

S. C. BROWN LEGHORNS EXCLUSIVELY.—At Evergreen Fruit Farm. Whoever purchases a setting of eggs or a fowl, receives a good poultry monthly for a year. Eggs \$1.50 per setting from prize-winning birds, scored into the '90's by I. K. Felch. Mrs. Belle L. Sprout, Frankfort, Marshall Co., Kas.

CAPITAL POULTRY YARDS—A. D. Jencks, Prop'r, North Topeka, Kas., box 853. Breeder of high-scoring Plymouth Rocks. Eggs, \$1.50 per 13.

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

PRAIRIE LAWN POULTRY YARDS—Contain the best strains of Golden Polish, Brown Leghorns, Light Brahmas, Plymouth Rocks—two yards, Bronze Turkeys, Toulouse Geese and Pekin Ducks. Eggs in season. Also proprietor GOLD DUCK HERD OF POLAND-CHINA HOGS. J. M. McKee, Wellington, Kas.

G. C. WATKINS, Hiawatha, Kas., originator of the size and good layers. Eggs \$2.00 per thirteen. Express prepaid.

E. E. FLOEA, Wellington, Kas., breeder and shipper of pure-bred poultry. Partridge Cochins, Plymouth Rocks, Single-comb Brown and White Leghorns, Rose-comb Brown Leghorns, Wyandottes, Light Brahmas, Buff Cochins, Langshans. Eggs \$1 per 13, \$2 per 30. Pekin duck and Hongkong geese eggs 10 cents each. Bronze turkey eggs 15 cents each. Stock next autumn.

PLYMOUTH ROCK EGGS—One dollar per thirteen. Plymouth Rock cockerels, two dollars each. Mark S. Salisbury, Independence, Mo.

JOHN C. SNYDER, Constant, Gowley Co., Kansas, breeds PLYMOUTH ROCKS and BRONZE TURKEYS. No fowls for sale. Eggs in season. Write for wants or send for circular, and mention this paper.

RICH. E. HANDEL, Topeka, Kas., breeder of fine Plymouth Rocks. Eggs, \$1.25 for 13. My Poultry Powder will cause an increase of eggs; also prevent and cure cholera, roup, gases. Try it. Price 25 cents.

EXCELSIOR POULTRY YARDS—C. E. Masters, Prop'r, Irving Park, Ill., breeder of the leading varieties of Poultry. Also Ferrata Rabbits, Pigeons and Pets. White Leghorns, White Wyandottes and White-Face Black Spanish a specialty. "Excelsior" is my motto—the very best is none too good. Eggs in season \$2. Send for circular, giving full description.

JAMES ELLIOTT, ENTERPRISE, Kas.—Proprietor of the Enterprise Poultry Yards, composed of the following varieties: Silver and White Wyandottes, White and Banded Plymouth Rocks, Light and Dark Brahmas, White and Buff Cochins, Langshans, R. C. White and Brown Leghorns, B. B. Red Games and Mammoth Bronze Turkeys. Breeding fowls strictly No. 1. Eggs \$1.50 and \$2 per 13. Also breeder of pure Berkshire Swine and Cotswold Sheep. Swine, sheep and poultry for sale. Your patronage solicited. Golden rule guarantee. Mention the "Kansas Farmer."

TOPEKA WYANDOTTE YARDS.—Breeder of Silver-Laced, White and Golden Wyandottes, S. S. Hamburgs. Pen No. 1—eggs, \$3 for 13; pen No. 3—\$2 for 13; Hamburgs, \$2.50 for 13. A. Gandy, 624 Kansas Ave., Topeka, Kas.

MISCELLANEOUS.

W. L. LAYSON LUMBER CO.—Farmers, call and get prices. Yards, First and Jackson streets, Topeka.

F. P. ZIMMERMAN, Lunch Counter and Meat Market, 116 1/2 St. East, Topeka. Farmers and everybody call.

SEEDS

J. C. PEPPARD, 1220 UNION AVENUE, KANSAS CITY, MO. Red, White, Alfalfa & Alsike Clovers, Timothy, Blue Grass, Orchard Grass, Red Top, Onion Sets, Tree Seeds, Cane Seed, Etc.

TWO-CENT COLUMN.

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

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

FOR SALE—Space in this column, to advertisers who wish for results at little cost. Try it?

FOR SALE—Three pure bred perfectly marked Gordon setter pups from imported sires. Eight dollars each. Three months old. John Whitworth, Emporia, Kas.

WANTED—About one hundred Merino, Cotswold or Shropshire ewes, 2 or 3 years old. John Whitworth, Emporia, Kas.

I HAVE CASH AND 10 PER CENT. NOTES.—To invest in a cheap Kansas farm. M. Hasbrook, 9 Ewing St., Kansas City, Kas.

FOR SALE ON LONG TIME.—Or trade on farm lands, two imported Clydes, one Cleveland Bay, one grade Perche stallion. Wm. Kirkendall, Axtell, Kas.

TO EXCHANGE—Clear land here for an improved farm in eastern Kansas with small incumbrance. Address E. C. Clark, Nonchalanta, Kas.

FRUIT-GROWERS, FARMERS AND MERCHANTS.—Send for catalogue of American Fruit Evaporators, and learn how to obtain good prices for your fruits. Prices of evaporators \$7 and upwards. H. H. Middleton, Agent, 1812 Mercier St., Kansas City, Mo.

STRAYED—From Mrs. Lewis, one mare mule, light bay, large knot on fore knee, spavin one hind leg. Leave information with J. S. Morse, lime dealer, Topeka, Kas.

FARM MACHINERY FOR SALE.—One ten-horse-power stationary boiler and engine; one Challenge feed mill; one Challenge six-horse-power; one Belle City feed and stlage cutter, A. No. 1, large size. This machinery is all in good condition and will be sold for half what new and no better would cost. J. B. Minturn, Colwich, Kas.

FOR SALE—FARMS AND MILL PROPERTY.—One farm of 240 acres, 200 acres in cultivation, balance fenced to pasture; fruit and forest trees; house with six rooms, good well water, windmill, good barn with stone basement. Farm in high state of cultivation, situated in Ottawa county, six miles from county seat—Minneapolis. One farm of 160 acres, 120 acres in cultivation; stone house with two rooms; fruit and forest trees; school and church facilities convenient; eight miles from Minneapolis. One hundred acres in Lincoln county, five miles from Beverly, a railroad town on the Saline river; forty acres in cultivation; small frame house; pasture fenced. Saw and grist mill on the Saline river, three and one-half miles from Lincoln; one of the best water powers in the State; 120 acres of land; plenty of timber; fifty acres in cultivation; balance fenced to pasture and corrals; houses, barns and outbuildings; railroad within forty feet of mill door. Any or all of the above property will be sold cheap and on easy terms. Inquire of H. W. Graham, Lincoln, Lincoln Co., Kas.

\$500 CASH—Will buy a first-class ten-horse-power engine and boiler (return fuel), a J. I. Case separator and a patent straw-stacker. The first cost can be made this year. Apply at once to Harry A. Stanton, Knox Building, Topeka.

EMPORIA PROPERTY TO EXCHANGE.—For land, \$15,000 New York farm for clear land. Exchange of all kinds. Farms and ranches for sale. Devon cattle for sale. Rumsey Bros., Emporia, Kas.

FOR SALE—A young Jersey Cooimas bull; dam the only recorded tested Jersey cow in A. J. C. C. butter record. D. D. Perry, Peabody, Kas.

FOR SALE—Two improved deeded quarters and one timber entry in the famous Bow Creek valley. Box 62, Lenora, Kas.

FOR SALE—Dedrick Hay Press—new size—bale 14x18. Cheap for cash. Address J. Pitney, Laclede, Kas.

FOR SALE AT A BARGAIN—A first-class threshing outfit, consisting of a ten-horse-power engine, separator and revolving straw-stacker. All as good as new. Apply to Harry H. Stanton, 111 West Sixth Ave., Topeka, Kas.

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

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

WATER GRIST MILL—Dwelling and ten acres of land to lease or trade for Kansas property. B. N. Turk, Holton, Kas.

WANTED—Gentle horse for light work two months for keeping. Good care. Address "F," KANSAS FARMER office.

WANTED—All those farmer boys who are thinking of attending a business college this fall, to know that we will deduct your railroad fare both ways to and from Topeka to any distance not exceeding 150 miles, from the cost of the fall scholarship if you go to our school. All the finest educators and best business education in the State. POND'S Business College, Topeka, Kas.

GARDEN TOOLS.—A full line of Planet Jr. hand and horse tools. Send for pamphlet. Trumbull, Reynolds & Allen, Kansas City, Mo.

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

SWEET POTATO PLANTS, TURNIP and BEET seed for stock. Soft maple, and all kinds of seeds. Trumbull, Reynolds & Allen, 1426 and 1428 St. Louis Ave., Kansas City, Mo.

LAWDALE HERD OF POLAND-CHINAS J. D. ZILLER, Prop'r, Hiawatha, Kas.

All stock recorded in Standard Poland-China Record. One hundred choice spring pigs ready to ship now, from twenty registered, most all aged sows, bred to four first-class boars. Write or come. Corres. promptly ans'd. Prices will suit you.

DETECTIVES—We want a man in every locality to act as Private Detective under our instructions. Particulars free. Central Detective Bureau, Box 195, Topeka, Kansas.

Agricultural Books.

The following valuable books will be supplied to any of our readers by the publishers of the KANSAS FARMER. Any one or more of these standard books will be sent postage paid on receipt of the publisher's price, which is named against each book. The books are bound in handsome cloth, excepting those indicated thus—(paper):

Table listing books under 'FARM AND GARDEN' and 'FRUITS AND FLOWERS' with prices.

Table listing books under 'HORSES' with prices.

Table listing books under 'CATTLE, SHEEP AND SWINE' with prices.

Table listing books under 'MISCELLANEOUS' with prices.

Table listing books under 'MISCELLANEOUS' with prices.

WELLS' MACHINE WORKS, OF FOSTORIA, OHIO

Want every person who is interested in boring for Water, Oil, Gas or Minerals, to write for their New Illustrated Catalogue of Well Making Machinery & Tools Mailed FREE.

NO POOL FOR US.

We want to state here that we do not belong to any so-called "Pool" or "Trust," but stand on our own footing and sell our celebrated Oak Brand Harness at live and let live prices. Beat these prices if you can: Our No. 1 single buggy harness, \$5.75; Our No. 4 single buggy harness, 9.75; Our No. 16 double buggy harness, 15.00; Our No. 18 double buggy harness, 18.00; Our No. 21 double farm harness, 18.50. All our harness are made from No. 1 Oak-Tanned Leather; and are hand-made. Satisfaction guaranteed or money refunded. Address all orders to H. A. EVERT HARNESS CO., 513 W. 7th St., Sioux City, Iowa.

SEED WHEAT

STRAWBERRY PLANTS, FRUIT TREES, SMALL FRUITS, DUTCH AND CHINESE FLOWERING BULBS, WINTER BLOOMING HOUSE PLANTS, FANCY POULTRY, PEKIN DUCKS, BRONZE TURKEYS, GERMAN HARES, &c. Our annual Fall catalogue, 1889, of Seed Wheat, Plants, Poultry, &c., will be ready by July 20. Samples of new, hardy and productive varieties of Winter Wheat, including the iron-clad RELIABLE and celebrated LITTLE BLUE No. 6, will be sent with catalogue for 10c. In postage stamps. Address, SAMUEL WILSON, Mechanicsville, Bucks Co., Pa. Catalogues free on application.