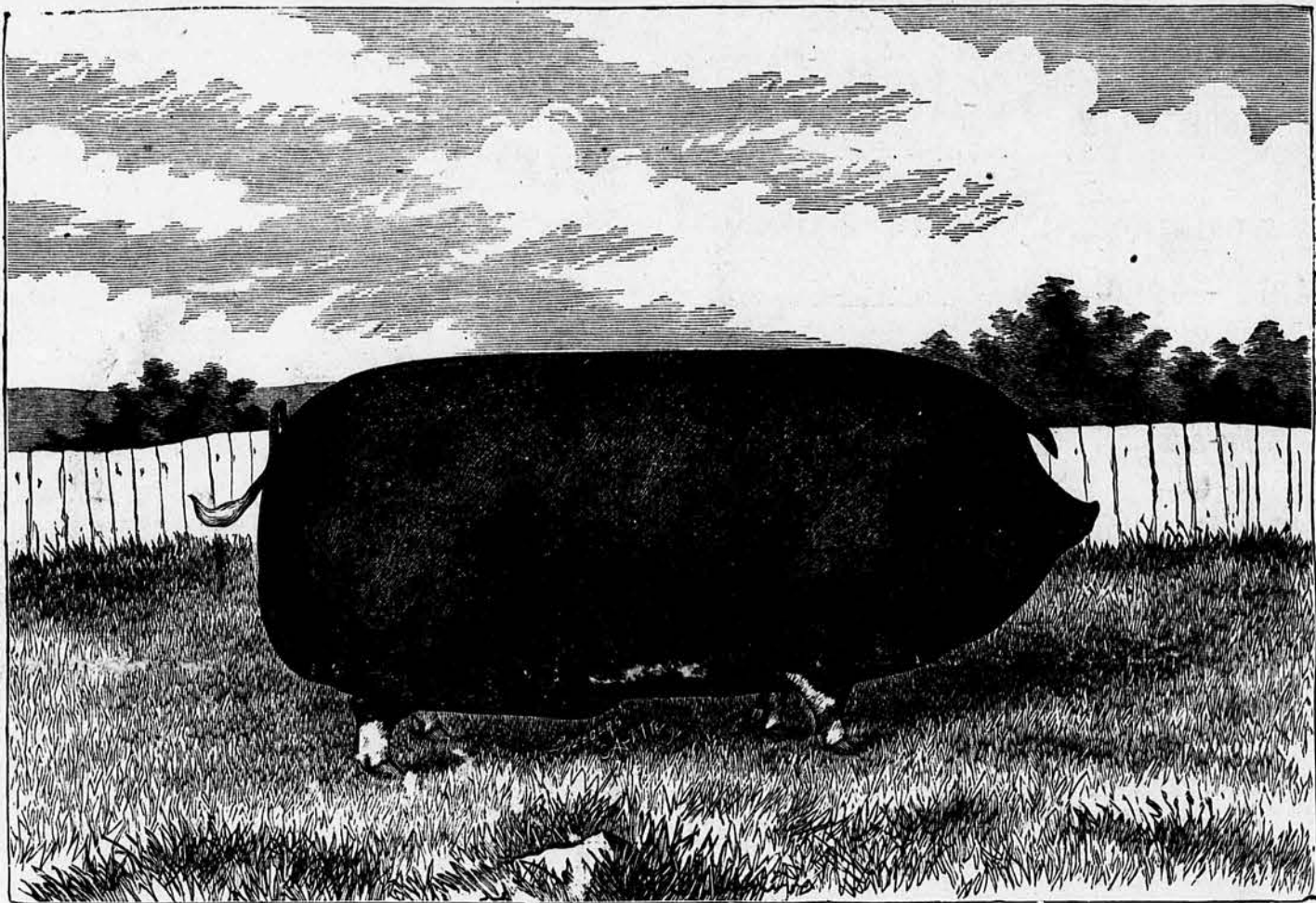


# KANSAS FARMER

ESTABLISHED, 1863.  
VOL. XXVI, No. 32.

TOPEKA, KANSAS, THURSDAY, AUGUST 9, 1888.

TWENTY PAGES.  
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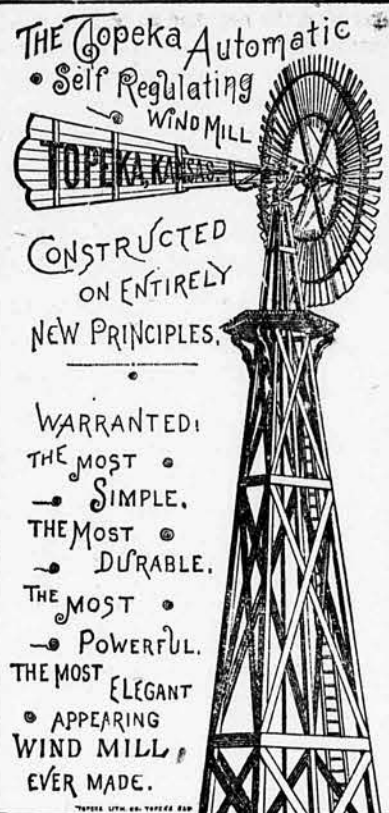
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## Agricultural Matters.

### ABOUT FLAX.

CHICAGO, July 23, 1888.

HON. W. A. PEPPER, MANAGING EDITOR KANSAS FARMER.—*Dear Sir:*—The greedy appetite of the flax plant finds the Kansas soil rich in those mineral manures which are indispensable to the building up a woody interior to support its crown of seeds, and on which to lay and cover with protecting cement the excelsior fiber of the world.

Governmental self-sacrificing generosity towards the East Indian (with his jute) prevents the utilization of flax fiber, but, until the Mills bill becomes law, we have left to us the seed.

That the farmer who last spring had the courage to sow flax seed may be induced to stack the flax straw and feed to his cattle, and in the spring return to the land in the shape of manure what the plant has drawn therefrom, I wish you to publish the enclosed letter:

#### FLAX AS AN EXHAUSTIVE CROP.

CHICAGO, February 13.—Editor of the *Tribune*.—In the Ohio Valley there is objection to flax on the score of injury to the soil. "It is hard on the land," is a common remark of correspondents. Such is the first greeting of the Statistician of the Department of Agriculture, December, 1885, to the flax industry of the United States—an industry which produced 12,000,000 bushels (at Chicago's average price, \$13,500,000) of seed the last year. Its several manufacturing plants in the West are valued at \$6,000,000, with an annual output of \$15,000,000. The right of discovery of the true character of the flax plant awarded to the Ohio Valley (in other words, State) is not quite correct. All intelligent writers on agriculture from the days of Pliny and Virgil—all cultivators of the plant from the date (1629) of the legal forced planting on Massachusetts sterile shores to the utilizing of its appetite for mineral manures in subduing the fresh-turned soil of Dakota—have conceded its soil-exhausting capabilities. There seems a lack of wisdom in political economy that forces the farmer to export the raw products of the farm, freighted as they are with the valuable manurial constituents of the soil, or causes the Western pioneer farmer to waste his own most valuable fibre (estimated at 162,500 tons), while to bind his sheaves he buys (estimated at 20,000 tons) twine made from the interior fibers of India.

The purchase is made possible by the sale of wheat at 50 cents per bushel, that enables the East Indian to supply his wants from English mills.

The true science of government will be wrought out but slowly. In the meanwhile let our department educate, assist, and ameliorate rather than cast at the poor farmer (flax is the poor man's crop) such hard, unrelieved utterances as: "It is hard on the land." To show there is another side—that there is a way out—is the only object of the writer.

Listen to what Tomlinson's *Cyclopedia* says: "The great objection urged against the cultivation of flax is that it is an exhausting crop. And this is quite true, for it abstracts a larger amount of nitrogen from the soil than many other crops. But under the new mode of management, copied from the careful systems of the continent, this objection is completely set aside. The restoration of the steep water, of the woody portions of the plant with the husks of the seed to the soil, completely renovates the soil, making it as well fitted to produce any crop as before."

We quote from Wilson's "Rural *Cyclopedia*": "All the fibrous portion

of the plant is elaborated out of the elements of air and water, so that the fiber alone might year after year for ages be removed from the soil, or the plant might for ages be cultivated on the same field by always returning to it the seeds, the scutching, and the steep water without occasioning a particle of impoverishment. Even the seeds contain a very small portion of inorganic matter, or matter derived from the soil, compared with the whole bulk; and when they are all used in cattle-feeding on the farm and their organic principles afterward returned to the land as an item of farmyard manure, they too, as well as the fiber, may be taken off for ages without impoverishment."

Read what J. Forbes Royle says in his "Fibrous Plants of India": "There is, however, one striking point of dissimilarity between the cultivation of wheat and that of flax. And we are indebted to Sir Robert Kane for having for the first time brought this point under the notice of the farmer in a forcible manner—viz.: that while the mineral ingredients which we remove from our fields in wheat, or cereals in general, become constituents of food and enter in this manner into circulation, from which under very favorable circumstances they return to the soil after the lapse of some time, the woody fiber of flax as a necessary preliminary to its being used by man is separated to a considerable extent from those very mineral substances which are so essential for its so successful growth. This mineral matter when economized in a proper manner by the farmer may be returned to his field to keep up the equilibrium of its fertility. The inorganic substances taken up by the plant are only instruments used in its production, which should be as carefully preserved as tools in a manufactory, and will then do further duty in promoting the elaboration of future crops."

Spon's "Encyclopedia of the Industrial Arts and Manufactures" says: "Analysis of the flax plant dried at 100 deg. (212 deg. F.) shows 3.2 per cent. of ash; this ash contains 20.32 per cent. of potash, 19.88 of lime, 10.24 of phosphoric acid. It is estimated that the flax grown on one acre of land extracts from the soil about fifty pounds of alkalis (chiefly potash) and twenty-four pounds of phosphoric acid. Almost the whole of this might be returned immediately to the soil if the refuse of the plant and the rotting water were utilized."

The soil of the Western prairies (in wide reaches) is so surcharged with the very ingredients required by the flax plant, as shown by the analysis, that it is important that they be reduced rather than increased. The reduction is practical through the cultivation of the flax plant which will grow in the greatest luxuriance on soil so overburdened with alkali as to hinder or entirely bar the cereals. The equilibrium of the soil would be restored by sowing flax on the sod, and the dreaded alkali would be taken up and become a source of wealth.

I will say in passing that, while the flax plant is more rapid, it is no more sure in exhaustion than the cereals. When either is cultivated the ingredients withdrawn should be restored, if needed, for the coming crop. This can be most readily accomplished by the cultivator of flaxseed. The woody center and the gum which cements the fiber thereto retain nearly all the earthy matter taken up; and the husk holds the remainder—the fiber is elaborated from air and water. The returning of the flax straw to the field whence it comes makes nearly a complete restoration. Should it not be needed on the identical land, then it is no less valuable on land on which the waste of previous

years begins to tell. But it is hardly necessary to return to earth this straw in its raw and undecomposed state, for as a forage it is superior, cattle accepting it to the exclusion of all other fodder. Thus, with the addition of the oilcake (which every feeder should use), the Western farmer has well in hand all this very exhaustive crop has withdrawn from the soil in a fertilizer without cost more valuable to his land than any known to commerce.

While it is so easy and practical for the cultivator of flax to retain the equilibrium of his fields, not so the producer of the cereals, as the mineral ingredients of the soil taken up become constituents of food which is sold to foreign lands, and thus the real wealth of our country is borne away beyond recall.

S. H. STEVENS.

#### Agricultural Depression.

EDITOR KANSAS FARMER:—Bailey and Mohler are both right in their explanation of the causes that operate to control prices of farm products and all other commodities that enter into commercial transactions as subjects of trade. When the supply of an article that is to be exchanged for another given article exceeds or becomes less relatively than the supply of the other, a change in the relative value is inevitable. This postulate covers the effect upon prices produced by a redundant or contracted circulating medium as claimed by friend Bailey. But even here the law of supply and demand is in full force. Suppose the volume of money could be doubled to-morrow, would the price of wheat, corn, horses, hogs, butter, be doubled? Not at all. The advance, if any, would depend upon an increased demand or a diminished supply. I sold butter in last May to the amount of \$116 at an average price of 30 cents per pound. In June my sales were \$16 at 25 cents. The supply exceeded the demand so largely that a respectable dairyman had no business in the market; sales at remunerative prices were impossible.

This is a plain case of overproduction. Last year the corn crop was short and corn sold in Sterling as high as 52 cents per bushel. This was a case of underproduction. In these instances the law of supply and demand controlled prices.

There is a mischievous fallacy inseparable from the idea that a redundant currency insures high prices and good times. When the volume of money suffices to lubricate the machinery of commerce so that exchanges can be made and balances adjusted promptly, further inflation only begets a dangerous speculative spirit that rushes its victims into wild and visionary enterprises, ruinous in their outcome. Any advance in prices effected by an increased supply of money would operate all along the line. The advance in the price of the thing you have to sell will be offset by the advance on the price of the thing you must buy. If the farmer was always a seller and never a buyer, such an advance would be to his advantage. But the modern farmer is apt to be a large buyer. Tools, machinery, buildings, labor, are all constantly demanded by him and are generally bought with the expectation that they are in some way to pay for themselves, which they never do. In the desperate struggle to meet expenses and pay debts more acres are brought under cultivation, more machinery bought, more men hired and larger crops raised, and the products thrown upon an already overloaded market. The farmer reasons that if corn is to be plenty and cheap he must plant enough more to raise the necessary amount so that the annual balance shall be in his

favor. In all other callings reduction in prices is followed by diminished production. Large crops as the result of extended cultivation are the farmers' curse, for such crops are produced at increased expense, and as a general rule their profitability diminishes in inverse proportion to the increased production. For instance, 500 bushels of corn sold from ten acres at 40 cents per bushel will yield a much larger profit than 1,000 bushels would yield raised on twenty acres and sold at 20 cents per bushel. All things being equal the 1,000 bushels has cost twice as much as the 500, and there is no return for the added expense. Ah! I mistake. There is a return. The railroad gets paid for transporting 500 bushels more, and the middleman gets his margin on the same, and the two combine to squeeze the farmer a little tighter for being such a fool as to work for them without pay.

There can be no doubt that the farmer is in a tight and a tightening place. The remedy (if there is one) is not so easy to suggest. For the present I will only say that I believe a system of restricted and intensified cultivation, making a reduction of both expenses and production possible, if generally adopted, will be a start toward restoring the balance to the credit side of the farmers' accounts.

P. C. BRANCH.

Sterling, Rice Co., Kas.

Luck as a factor in profitable farming ceases to exert tangible influence when fertility begins to be impaired by injudicious methods, and that condition is sure to come on every farm where luck is counted as a factor.

We ought not to be too anxious to encourage untried innovation, in cases of doubtful improvement. For a quarter of a century Dr. Sage's Catarrh Remedy has been before the public and passed through the severest test and is pronounced the most reliable remedy for that disagreeable malady. Thousands of testimonials of its virtues. 50 cents per bottle. By druggists.

Cuttings buried in moist sawdust or moss, or even sharp gritty sand, and thus preserved in boxes of a convenient size for handling and stored in a cool cellar, are the most easily and satisfactorily planted. The requisites for keeping cuttings over winter are a low temperature, moisture and the exclusion of air.

#### It's Always the Way.

"Didn't I tell you so?" said a gentleman to an acquaintance whom he chanced to meet on the street; "it's always the way." "What's always the way?" inquired a mutual friend of the two men who happened along just then. "Why, just this," replied the first speaker; "you see Smith, here, the last time I met him he had one of the worst coughs you ever heard. He complained of a loss of appetite, of night sweats, of low spirits and other unmistakable premonitory symptoms of consumption. I told him to get a supply of Dr. Pierce's Golden Medical Discovery at once. He did so, and look at him now! Did you ever see a healthier looking man? The 'Discovery' has snatched thousands from consumptives' graves. I knew it would cure Smith. It's always the way."

#### Thirty Miles Disappear.

Thirty miles of journey is a big thing to disappear, but this distance has been dropped out between Kansas City and Chicago. How it happened is thus figured: The Chicago, Santa Fe & California railway is completed between Kansas City and Chicago, and the distance between the two cities is only 458 miles, measuring from Union Depot, Kansas City, to Dearborn Station, Chicago. This is exactly thirty miles less than by any of the old lines, so you have to travel thirty miles less, your freight has to be hauled thirty miles less, and practically the Santa Fe has made thirty miles disappear. A few years at this rate and Kansas will be in New England.

One dollar is all that we now ask for this paper one year.



## The Stock Interest.

### THOROUGHbred STOCK SALES.

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

AUGUST 23.—W. H. H. Cundiff, Short-horns, Pleasant Hill, Mo.

### CROSS BREEDING SHEEP.

Is it Profitable for the Average Farmer to Cross Fine-Wool Ewes with Coarse or Middle-Wool Rams?

A paper read at the Sheep-Breeders' meeting, held at Metamora, Lapeer Co., Mich., by Henry Lee.

It is with reluctance that I undertake to express my ideas on cross-breeding. And in the beginning I wish it distinctly understood that it is not my motive to antagonize any industry in our midst, or throw any shells in the camp of my friends. I hope it will be received with the same friendly spirit with which it is given, remembering there is room for all in the varied industries, no matter what particular strain we pursue to reach the best desired result. But while strongly convinced of the correctness of my own views and always ready to give a reason for them, I have no disposition to dogmatize; but am always ready to listen to argument and to correct my opinions if in any respect convinced of their error.

I do not believe that any person with a cast-iron set of opinions is qualified to be a leader of others, and am endeavoring to learn more and grow wiser every day, that I may be better qualified to help others into clearer views of what is true and good, and if I should succeed in throwing any true light on this subject to any one I shall be well pleased.

This is an age of improvement. The farmers of to-day compared with those of fifty years ago show a great stride on the road to advancement. We seldom hear of any questions arising as to how they might improve their system of rotation of growing crops upon the farm, or what particular course to pursue in regard to breeding for the best results. But to-day these are the living thoughts in the mind of every farmer, and it is gratifying to know that, as a class, they are able to grapple with the many questions with which they are interested and make intelligent decisions thereon, not from the theory alone but from actual practice and experience.

The question is assigned to me, "Is it advisable to cross fine-wool ewes with coarse or middle-wool rams?" There is evidently some reason for this question arising in the minds of the farmers of to-day; it must be they are not fully satisfied with the course of breeding they have been pursuing for the last thirty years, and are seeking to find out if there is no other way that is better for them to pursue. This is a question that requires a great deal of careful thought and experience. I will try to express my views on a broad plane, admitting the fact in the beginning that the supply and demand regulate the price to a great extent. The farmers realize the fact that their flocks have been decreasing yearly for the last five years. Wool has been low in price, slow in sale, and the serious question seems to be what are we to do to build up our failing industry?

We depend on three different sources for the profits from our sheep, viz., wool, mutton and increase. Now, the grade of sheep that affords the largest profit with the least expense seems to me to be the most desirable. Let us consider wool first, follow it from the sheep's back into the hands of the manufacturer and see if we can gain any information in regard to its comparative

value as respecting the different grades. Michigan has but little fine XX wool, it mostly being X fine. This class of wool for three or five years has not been sought after as in previous years. Michigan is noted for growing very heavy fine wools; while we have some as good wools as any State our reputation has been impaired by the system of breeding that we have been pursuing. It seems the study has been to get the largest average weight irrespective of what it was composed, some of it containing as high as 70 per cent. of foreign material, losing sight of the fact that the value of wool is to be fixed in the near future not upon its crude weight, but upon its weight of scoured wool in its grade. To-day Ohio stands at the head on the quality and price of her wool; it is always sought after in the market at the highest price, and if she could grow enough to supply the demand the manufacturer would sooner buy that class of wool than take his chances on the fine X of Michigan. Let us compare the manufacturer's prices of Ohio and Michigan wool July 1st, 1887, and see if we can gain any information to prove the above statement:

OHIO.		MICHIGAN.	
XX.....	34@36c.	X fine.....	30@32c.
X.....	32@34c.	Medium.....	27@40c.
Medium.....	30@32c.	Quarter-blood.....	37@39c.
Quarter-blood.....	37@39c.	Common.....	31@33c.
Common.....	31@33c.		
COMBING WOOLS.			
Fine Delaine.....	35@38c.		
Medium washed.....	38@40c.		
Quarter-blood.....	38@40c.		
Low.....	35@37c.		

We conclude from the foregoing that the wool-producers of Ohio are breeding differently and obtaining a better class of wool than in Michigan. I am very sorry to admit it, but it is nevertheless true. There is no good reason why we are not able to produce as good wools as our neighbors, with proper breeding, thereby placing us on equal footing, where we rightfully belong.

Now, what seems necessary for us to do by way of breeding only to improve our X wools to reduce the amount of foreign matter, thereby reducing the per cent. of shrinkage. This can be done by proper crossing. The short, stubby, fatty, tarry, wrinkly fine rams should never be used, for if any one decides to use a fine-wool ram to keep up his standard let it be the best that he is able to get, thereby going forward instead of backward, and with the proper crossing we can make our X wools second to none.

There has been of late a large demand for combing and medium wools at larger prices. The only way we can grow this wool is by a cross between the fine and coarser breeds, the object being to increase the size of carcass and the length of staple. What cross are we to make? Will it be on fine ewes and a Leicester or Southdown ram? From my experience and observation I should say no, for a cross on the first named, I think, makes the poorest one I ever made; on the second named you are shortening your staple of wool with too much dryness. I think the safest cross to make is with a first-class Oxforddown, Hampshiredown or Shropshiredown; the first two I have had no experience, and speak only from observation. My experience has been with a fine class of grade ewes on a Shropshire ram, and I must say I am well pleased with the result.

You may ask the question why I made the change. I will say that it was through disgust that arose by meeting the buyer and being told that my wool was not up to the standard, staple too short, too heavy and dirty. Not being fully acquainted with what was necessary, I thought they intended to abuse or impose on me by wanting to shrink my clip about half. But after I became better acquainted with the different qualities of wool I cooled off en-

tirely, and made up my mind that it was the duty of every grower to inform himself what wool must be to be up to the standard in the different grades. Every person who does anything has or ought to have a motive for what they do. My motive was to add to the size of carcass, length of staple and number of increase, and I think it is a success, as I have here a sample of wool gotten by this cross, also a sample of the wool of sire and dam which you can all examine for yourselves.

We will now consider the mutton and increase of this industry. Mutton has become an important factor in the meat consumption, so there is a large demand for mutton sheep at high price. Messrs. Deming & Hagerman, of Oxford, Feb. 1st, purchased of James Lessiter, seventy-five lambs weighing 7,350 lbs., at 6 cents per lb.; they also bought of Spencer Soper eighty lambs weighing 7,580 lbs.; so says Pontiac Bill Poster of Feb. 8th, and I am informed they were of the grade of which I have spoken. I will make a fair statement of what I think it would be safe to reckon:

100 Ewes, medium grades, average 6 lbs. at 40.....	\$240 00
85 Lambs, medium grades, at \$3 per head.....	255 00
Total.....	\$495 00
100 Ewes, fine, average 8 lbs. at 22c.....	\$225 00
50 Lambs at \$2 per head.....	100 00
Total.....	\$355 00

Leaving a balance in favor of medium of \$139. My estimate on the price is on the Philadelphia market last July, this being the highest price of these qualities of wool.

My experience has been a loss of 50 per cent. of my lambs for quite a number of years, so that my experience has not been very pleasant with fine-wool rams. Last year I crossed fifty ewes with a Shropshire ram and raised forty-five lambs, a loss of only 10 per cent. They were sold to go to Buffalo market about Sept. 10, for \$3 per head, and I think it the most unwise small deal I ever made when I sold them.

Let it be distinctly understood that I take the stand that the farmers of the United States, with proper legislation, should grow enough wool and produce to clothe and feed her millions without the aid of any foreign nation. The sixty millions of people in the United States require for consumption annually about ten pounds of unwashed wool per capita, or 600,000,000 lbs.; we now have 44,759,314 sheep, producing about 265,000,000 lbs. of wool the last year. For the fiscal year 1887, we imported raw wool 114,038,080 lbs., and in woolen and worsted goods probably about 150,000,000 lbs. Thus, while we are importing one-half the wool we use, are we to be informed that the low price of wool is caused by an over-production in the United States? We need 50,000,000 more sheep than we now have in order to supply the demand of this country, requiring the labor of 50,000 American shepherds, placing \$100,000,000 in the hands of the farmers and laborers annually, which is now paid to the laborers and producers of other countries. And I am sorry to say our numbers are decreasing and have been for four years. Let me see if I am correct: The Report of the Bureau of Statistics made in 1887 contains the following statistics:

Report in 1884.....	50,626,626 sheep.
" 1885.....	50,390,243 "
" 1886.....	48,322,831 "
" 1887.....	44,759,314 "

Making a decrease in four years of 5,867,312. We can readily see that our flocks are decreasing and the whole industry waning, the reasons why I will leave for you to decide.

In the fall of 1887, a large draft horse breeder of Dwight, Ill., had a mare injured on a threshing machine. He turned her in the pasture among other

mares, against my advice. In a couple of days she aborted. Within two weeks twelve others in the same pasture miscarried, although apparently in perfect health. In March of this year a trotting horse breeder of Odell, Ill., had a mare kicked when within two months of foaling time. She lost her colt from the effects of the kick. The trouble at once spread to his other mares until nine had prematurely lost their colts. I need not multiply instances. The foregoing are sufficient to prove the contagious character of equine miscarriage. Our safety lies in keeping our mares in small lots, separating all that are inclined to kick. Then if a certain mare should get injured in any way remove her from the others at once. If she aborts, keep her isolated for two weeks at least. During the fall and winter notice your mares every day. If any then show a sinking of the muscles of the hip or an enlargement of the mammary glands, separate them at once. Feed to each of such mares a quart of wheat twice a day for a week and you may ward off the danger. But keep every such mare isolated until the danger is past. When a mare has miscarried in a stall, wash it out carefully with soapsuds, in which there is a small quantity of carbolic acid. In horse-breeding, as in all things else, "eternal vigilance" is the price of success.—J.H. Funk, in *The Mark Field*.

### Increasing the Value of Manure.

EDITOR KANSAS FARMER:—Where the stock is allowed the run of the pastures during the summer, as is the general practice in the West, the quantity of manure that will be made and saved will be very small. But as soon as the feed in the pastures fail and feeding in the stable or feeding lots commences, with care the quantity can be very largely increased. It should always be an item to secure as large a quantity of manure as possible, provided of course that the quantity is not increased at the expense of quality. Sufficient bedding should be furnished to absorb all the liquid voiding and at the same time keep the stock reasonably clean and comfortable; but too much bedding should not be used to increase the quantity. Upon the feed and the kind and quality of the bedding largely depends the quality of the manure. And the farmer who feeds liberally on wholesome nutritious food will be able to receive a larger amount and a better quality of manure than if the stock are fed upon the plan of squeezing through.

Poor stock and poor feed make poor manure, and good stock well fed will give us a rich manure. It costs no more to handle the one than the other; the stock that is well fed and properly cared for will return the best profit and give a better quality of manure to add to the fertility of the soil.

Grain and bran with linseed meal increase the value of the manure, provided of course, that good care is taken to save properly. In many cases bran and oil meal add to the value of the rough feed, such as hay, fodder and straw, to make the purchase and use of them profitable, leaving out the value of the manure entirely. In many localities bran and oil meal are purchased and fed to stock because they will increase the value of the manure sufficiently to make the purchase and use of them profitable.

Stock can be wintered—sheep, cattle and horses—on good hay and bran, sheaf oats and bran, corn fodder and bran with a little oil meal added, clover hay, straw and bran, and can be kept in a good condition if properly sheltered, and the value of the manure be of the best. But if either of



these materials is fed alone to stock out of doors, exposed to all kinds of weather, the value of the manure will be very much less, the quality of the food and the manner of feeding having much to do with the quality of the manure.

N. J. SHEPHERD.

Eldon, Miller Co., Mo.

#### Fattening and Watering Hogs.

The process of converting grain into pork by means of a machine called a hog, is by no means a difficult one, provided the machine is kept in running order. It is folly to suppose and expect that a hog can convert any and all kinds of food into pork. It is necessary that, if we want pork, we must feed those foods that will produce flesh and fat. When hogs arrive at the proper age for fattening, see that every one is in a healthy condition and is thriving. The system must be in perfect order, that food may not be wasted. Don't throw them in a wagon-load of corn, reminding your hogs that that is all they will get for a week, but gradually and systematically work them up to "full feed." Do not change the diet too suddenly, and especially use care in changing from green to solid food. Adopt regular hours for feeding, and the animals will soon learn to expect it about that time every day. With old hogs, food twice a day is often enough, but with young shoats, I would advise feeding them three times a day, as by only feeding twice they overload their stomachs. The food should always be given in a clean, wholesome condition, and never allowed to sour. The barrels or vats in which the food is mixed should be cleaned after each feeding, and all surplus food removed. The main object should be to keep your hogs with good healthful appetites. Hogs fatten best when not disturbed or excited. Never allow young pigs to run with fattening hogs, as their running about often excites the older ones. The important thing now is to promote idleness and sleep. I believe that feeding about 6 a. m. and 6 p. m. are perhaps the most satisfactory hours during summer and fall. The character of foods has been discussed in another place, so it need not be repeated here, except that I will urge a systematic course in feeding, using cooked or steamed foods and having the greatest possible variety of foods. There is no doubt that hogs can be fattened quicker and with less food, if provided with good warm houses, and the food given in troughs and not scattered about the ground. I do not advise placing too many together, but those of nearly uniform size may occupy same pens or apartments. Slops thickened by meals are very desirable, and are certainly far more economical than entire grain. Vegetables and roots may be used liberally in winter fattening, but this must not at any time form the whole diet, as they do not contain much fattening qualities. Use liberally of salt and wood ashes, cinders, refuse coal, slacked lime, brimstone and charcoal about once a week, each in small quantities. Above all things see that your hogs have unfailing appetites and are in good condition physically.

The watering of hogs is also very important and should be done with some system. The heating effects of corn are often aggravated by pouring into the overloaded stomach a mass of cold water. This often results in a severe purging that debilitates the digestion more than anything else. Water should be given hogs in small quantities, and it should be warm enough to have the chill taken from it. By following this course, there will be less disturbance of digestion. The cravings of an animal suffering from such intense internal heat, caused by overfeeding, should not

be satisfied by allowing perfect freedom to cold water. As an animal grows fatter there is less waste of moisture from the system by evaporation than when the animal is in thin flesh. There is, besides, in a fattening animal, a gradual hardening of the flesh, caused by substitution of fat for water in the system, so that well-fed, fattening animals do not require as much water as the stock hogs, and when roots and vegetables are fed, but little water is actually necessary. If a fattening hog shows signs of frequent thirst, this is sufficient evidence that it has been overfed, which has brought on fever and caused a derangement of digestion, so that care should be used that an animal shall not drink too much. The instinct of the animal will not be a proper guide as to its appetite. Then it is far better to prevent all this disorder by giving water that has been warmed. These facts can easily be applied to all animals, for it is known that all beasts suffer more or less from the injurious effects of taking cold water into the system. Then I believe it is well worth the trouble to supply good, roomy bathing apartments for all kinds of hogs, whether in summer or winter. Hogs require nice, clean, pure water for all purposes. It is advocated by some that by boiling water before giving to hogs, will reduce the liability to disease, as any disease germs that might be in the water would thereby be killed. The plan is a good one and might be more generally observed.—Lewis Brown, in *Swine Breeder's Gazette*.

## In the Dairy.

### ENSILAGE.

Heretofore we have given but little space in our columns to the subject of ensilage because, for the great majority of our readers, we did not consider it a practical question. It has been impracticable largely because of the cost of the silo on the old methods, but especially because of the cheapness of food in the trans-Mississippi States and the high price of labor. Besides, the extravagant statements made by the early friends of ensilage were not calculated to favor its introduction or to commend it to practical farmers in the Northwest.

The careful experiments that have been made of late years, however, have removed much of this prejudice by abating these extravagant claims, and cheaper methods of construction, together with the necessity of utilizing the corn crop, have brought farmers to a more favorable consideration of the subject. The most reasonable estimate of the value of ensilage that has lately come under our notice is that of Prof. Henry, of the Wisconsin Agricultural college, which we quote:

1. Even though ensilage made from Indian corn has no more feeding value than the same amount of material dried into good fodder, the difficulties and expense of caring for the dried fodder are such that ordinarily the silo is preferable.
2. The usual waste from feeding dry fodder is very considerable, while for ensilage it need be none at all.
3. Feed can be so much more compactly secured in the silo than in any other way.
4. Husking, cribbing and grinding corn are useless operations for the most part, and are expensive and in a measure wasteful; nothing is added to the value of the crop by any of these processes.
5. My opinion is that for the Northern corn-belt smaller varieties of corn will give nearly or quite as much feeding material as the large varieties, with less labor to handle them.
6. If the farmer has not planted any ensilage corn he can still use his field crop for that purpose if he desires to fill a silo.
7. The clover crop, in my judgment, is a very promising candidate for ensilage, and the farmer who tries it for the silo will be well pleased with the results.

It should be borne in mind that Prof. Henry is one of our most thorough and exact experimenters, with ample means at his disposal, and hence his conclusions are entitled to great weight.

He quite agrees with the earlier experiments of Prof. Sanborn, then of the Missouri Agricultural college, that the silo adds nothing to the nutritive qualities of fodder. He bases the chief value of ensilage on the fact that it is the most economical method of preserving fodder and corn when used for feeding purposes. This economy depends, of course, on circumstances. We have not much doubt but that when corn has to be cut up and handled on the old methods, and when lumber is not too dear, there is economy in the silo.

It should be noticed that the methods of constructing silos have been greatly improved. The only point in ensilage is the exclusion of the air. Ensilage is 'canned hay or fodder, that is all. Formerly it was supposed that the silo had to be under ground, the walls of stone and the ensilage heavily weighted. Now it is found that an above-ground silo is just as good as under-ground, that wood serves the purpose equally well with stone, and that but little weighting is necessary, the silage furnishing much of the weight necessary to exclude the air. It is found, moreover, that cutting corn fodder may be dispensed with and the corn fodder, as it comes from the field, placed in it, butts and tops alternately.

But we are not even yet prepared to accept all that is said in the way of cheap silo construction, or rather we would not advise any one to risk much by way of experiment. For instance, a recent writer in the *Country Gentleman* says:

A few days since I visited the farm of Mr. L. H. Rogers, at Sherman, N. Y., to see the ensilage he had preserved in a common mow, with no air-tight walls. He has put fodder up in this way for two years and thinks the expense of silos entirely unnecessary. His corn was put in whole and was as good food for cows as one could wish with this exception, that it was sowed too thickly and had no ears. It smelled somewhat sour, but there was no acid taste. His cattle, sheep and lambs, and pigs and poultry all ate it with a relish. He had fed nothing else to his cattle during the winter and they were in fine condition. Mr. Rogers has been familiar with ensilage since its use in this country and recognizes its great value to the farmer. He says any of the directions for making and filling silos, if strictly followed, will produce a fine fodder, but he thinks no better than he has in his own mow.

We suspect that Mr. Rogers' barn is a great improvement on most barns in the West, and hence that it would not be safe to follow his example. Still, it must not be forgotten that in England, with its moist climate and mild winter, the silage stack is one of the common methods of making ensilage. In this case the hay is put up green and often wet, a heavy pressure is applied by a patent process, the sides trimmed and the trimmings thrown on top, and the whole covered with thatch. It does not follow from this, however, that this system would be practical under our widely different conditions. This much, however, is known definitely, that clover wilted but not dried can be put in a tight barn and will keep perfectly except a few inches on top. There must, however, be no open doors nor loose floors nor open cracks in the wall, nothing, in fact, but a ventilator in the roof by which currents of air can have access. Clover put in stack in the same condition will spoil utterly. It will, in the barn, become very hot, just as ensilage does, but the hay comes out in the finest possible shape.

In our own experience in handling either clover or timothy we find that hay may be handled much greener than is generally supposed, if it is placed in mow with no floor whatever and built up solid from the ground, whilst hay in the very best condition placed in a mow with air currents under and around it, comes out dusty. All this shows that, old as is the practice of hay-making, there is yet much to be learned on the subject.—*Iowa Homestead*.

Remember the FARMER is now \$1 a year.

#### How to Raise Calves.

After thirty years' experience in rearing calves, during which time I have tried both raising by hand and allowing them to run with the cows, I am decidedly in favor of the former plan. First, because it is cheaper, and, also, because a calf raised by hand seldom gives trouble by sucking. To raise a good, thrifty calf by hand requires care, but so does anything that is done well. I prefer to let the calf remain with its mother three days, as it is best for both mother and calf, as the milk at first contains purgative qualities needed for the calf, and it also will develop a healthy appetite, which will make it easier to teach it to drink. When taken from the mother, shut the calf in a stall or pen about three by six feet; this will give it plenty of room until it is several weeks old. As a rule, there will be little trouble to teach a calf to drink, but you will need to exercise patience for a day or two. Give the calf new milk—from three to four quarts at a feed—for a week or ten days, or until you see it is fairly started to grow. Then substitute skimmed milk, warmed to the temperature of new milk, and with a small amount of oatmeal to replace the cream. Begin with a tablespoonful to a gallon of milk. Prepare it by pouring boiling water over it, and let it thicken to a jelly before mixing it with the milk. A pound of the meal will thicken two and a half gallons of water. The amount of meal may be increased gradually to a gill, or possibly more. By the time the calf is three weeks old, you should begin to teach it to eat. Place a small handful of good, bright hay—clover preferred—where he can reach it. Throw a handful of shelled corn in his trough, and dust a small quantity of wheat bran into it daily. I think many calves are unthrifty simply because they are not furnished coarse food soon enough. By the time your calf is three months old, you should have it eating hay or grass and bran as regularly as a cow, and then you can begin to diminish its allowance of milk, and in two weeks you may reduce the milk to a quart at a feed, just enough to color the mess, which will then consist of a pint of bran and a gill of meal made into a gallon of gruel and colored with the milk. Keep this up until your calf is five or six months old, or until it eats dry bran readily, and make no sudden changes of diet. Shelled corn, at the rate of a pint a day, is good for it while on full-milk feed, but bran and oats should take the place of corn as the milk is decreased. Three things must be carefully observed, if you expect your calf to remain thrifty, and avoid indigestion and scours, and these are, temperature of food, regular quantity and regular hours of feeding. With careful attention to these points you may get all the butter from your cow and grow a smooth, thrifty calf, which will be worth just as much at a year old as though it had sucked.

If you wish to produce long-haired, pot-bellied animals, have no regular hour for feeding, but do it anywhere from 5 to 9 o'clock; give sometimes three quarts and again six or eight, and feed it sometimes hot and sometimes cold, keep them in a filthy pen and furnish them nothing but milk, and if they do not die of scours—which they probably will—you will have some fine samples of scald-wags, such as are quoted at \$1.75 to \$2.50 per 100 pounds. I would rather raise a fall calf than one born in the spring. It can be kept in a warm stable through the winter and fed so that it will be thrifty, and then it goes to pasture for a long season of growth, and by the next winter is almost a cow, while the summer calf has a long winter before it after it has been fed through the summer. A cow that comes in fresh in October will give more milk and make more butter in a year than one that comes in fresh in the spring, and there will be more months of high-priced butter, also. The dairyman who tries fall calves will soon be convinced that there is more profit from the milk and better developed calves than from the usual custom of breeding for spring.

—Waldo F. Brown, in *Farm and Fireside*.



## Correspondence.

### Tariff on Binding Twine, and Other Articles.

[A friend sends the following letter, written by Hon. A. J. Grover, United Labor candidate for Congress. It was printed in the Kansas City Times as special correspondence without signature. It is reprinted here by request of the sender.—EDITOR.]

Every farmer who raises small grain is compelled to pay about 45 cents per acre under the present tariff for binding twine. The twine in use is made of sisal. The tariff on sisal by the bale is \$15 a ton. No sisal is grown in this country, so the tax on this grass protects nobody except the trust or combine consisting of half a dozen twine spinners. The tariff on the twine, if spun abroad and imported, is 35 per cent. *ad valorem*, which constitutes a prohibitory tariff. This tax every farmer that cuts and binds grain has to pay on his binding twine directly to the little combine of twine twistors in this country. There is not a pound of binding twine imported. The \$15 a ton is collected by the government. This tax which he pays is added to the cost of the raw material by the manufacturer, together with the 35 per cent. duty on twine, the latter tax costing him nothing. Having a complete monopoly of the business the manufacturer charges as much profit above the duty as his greed may suggest. The charges to the farmer are extortionate, about three times a fair price, and are kept up by the aid of the tariff.

Nobody is benefited one dollar by the 35 per cent. tax on binding twine except the manufacturer, but it is an unjust and oppressive burden upon the farmer. The straw of small grain is generally heavy on the rich Western lands, whatever the grain crop may be, and it takes three pounds of twine per acre to tie it in bundles. The twine retails at 15 cents per pound, which makes 45 cents per acre for binding twine, 35 per cent. of which goes to the twine monopolists, by the aid of the tariff.

Kansas in 1878 raised 2,966,040 acres of small grain. Suppose in the last ten years the acreage of small grain in Kansas has doubled, we have this year cut 5,932,080 acres of small grain, which has cost the farmers of Kansas 45 cents per acre for twine to tie up in bundles, aggregating \$2,664,436. With the tariff of \$15 a ton on raw sisal, or three-fourths of a cent per pound, which goes into the National Treasury, and 35 per cent. on twine which goes to the twine-makers, the farmers of Kansas pay unnecessarily an aggregate annual tribute to the twine trust of \$862,859.52, and \$1,848.21 into the United States Treasury on the raw sisal. This is an enormous and unnecessary tax. The Mills bill removes the tax on cotton ties; why should it not be removed on binding twine for grain as well? The 35 per cent. *ad valorem* tax prevents importation and protects nobody but the twine-maker. The farmer sells his wheat in the free trade market of Liverpool; it would seem but fair that he should be permitted to buy twine to tie it up in a free trade market also.

The cheapest unskilled foreign labor for the most part is no doubt employed by the twine mills. Not 100 American laborers are probably employed in this industry. Cheap as wheat and other small grain is, about 17 cents per acre is extorted from the farmer before he can cut it. How long do the high tariff leaders of the Republican party expect it will be before Republican farmers will become tariff reformers under such a system? They are blind to their own interests if they do not vote the tariff reform ticket this fall.

It is not alone on binding twine that these oppressive taxes are levied, but on a farmer's entire outfit—the reaper with which he cuts the grain, the plow with which he plows his field, his harness, horse-shoes, wagons, hoes, forks, and at least \$500 on every \$1,500 threshing machine he buys. The Republican party platform pledges the party that no part of this robber system shall be touched if it can prevent it.

In the Solomon Islands, so says a recent writer in the Westminster Review, the king periodically selects several hundred of healthy meaty men and women to be from time to time butchered and roasted for his table. These victims feel it to be their duty to submit, indeed that it is an honor to be

thus chosen to die for the king, and patiently wait their turn to be slaughtered and eaten. When interrogated they were surprised that the propriety of the practice should be questioned. The farmers of the West are equally meek, reverential and submissive toward the beneficiaries of the tariff system. They are selected to bear enormous and unjust burdens because they will patiently submit to be taxed. They are like the Solomon Islanders who answered the writer referred to: "Why the king must have his meat!" The Republican farmers submit to be devoured by the tariff lords and think it all right and fiercely defend the system that destroys them.

A. J. GROVER.

NOTE BY THE EDITOR.—Mr. Grover needs to be more careful in his statements. Before assuming to state positively just how much the tariff on twine increases its cost to the farmer he ought to know what it would cost without the tariff. And before he assumes to state that farmers could obtain their farming tools cheaper if we had no tariff laws, he ought to know that he is right. The truth is, that all farm implements made in this country are made and sold as cheaply as are like materials in other countries. American grain and grass-cutting machines, rakes, plows, hoes, etc., are now sold in Great Britain in competition with English and Scotch make, and they are preferred in every foreign market where they have been tried.

### Some Suggestions to Kansas Farmers.

We are receipt of a very long letter from a Colorado friend who says he "spent over a year in Kansas and walked around among the farmers within its borders probably 800 miles," and we have taken the liberty of cutting the letter in two about the middle and giving the last half to our readers by way of suggestion. The first part of the letter criticizes our way of taking care of stock, concluding that part by saying our native grasses are not good except for about four months, and that leads him to speak of grasses and other plants adapted to Kansas soil and climate. He says:

Next you want clover. If you have difficulty in getting it started, keep at work at it till you do get it. It will do in Kansas where it is intelligently managed. I know of many instances where it is doing well. But I know a man there (and there may be others like him) who said: "Oh! I'll never do here; it won't stand. I tried it once and it did well for a year or two; I mowed two good crops in one season; the next year I pastured it and that was the end of it." "Did your stock seem to like it?" I asked. "Oh, yes. They ate it clear into the ground, but it died out, and wife was mighty sorry, for it kept the cows in flush milk long after the prairie grass was dried up and they all thrived mightily on it while it lasted."

He thought it was a grass and ought to live right on. He did not know that it is only a biennial, and that if he had, that last year, plowed under a crop of seed and managed it right, he could always have a crop of clover there without ever re-seeding.

Next, you upland farmers depend too much on corn. It is a crop that depends too much on rain during the season when you get the least of it. As a substitute I recommend first of all red clover. It will surprise you, the uses you can make of it when you once find out all its merits. Then try alfalfa on all your dry soils; try it thoroughly; put on lots of seed even if you take only half as much land, and keep everything off from it except the mowing machine till it is well established. Where you get a good stand once, you will think it is the best thing you ever did.

Then sow orchard grass; for first, almost, before everything, in Kansas, you need a good, reliable grass that will be both early and late, hardy, and good to eat, and that will bear dry weather. The nearest to this is orchard grass. Sow it thick.

And, in passing, let me say, if you have trouble in getting a stand of any or all of these, try them alone. Don't try to save a crop by sowing them with wheat, or barley, or oats, under the mistaken notion that they need shade. They don't need it all, and if they did, you remove it and let the burning sun in on them just the right time to scorch them to death. Sow them alone and you will probably succeed.

Next, let me advise such crops as will mature from the early rains and are also proof

against the chinch bug. Among them I recommend the Canada field pea. Plow in the fall, and put them in as early as you can in the spring. Every pound of the crop is the choicest of feed, and after the crop is off the ground, replot it and sow the Southern cow pea, as it is called, but it is really a bean. This also is rich like clover, chinch-proof, and will mature by frost; then, if you feel able, plow it under—for corn, if you must, but better for clover or alfalfa.

Finally, when you get around to it, grow root crops for feed, especially turnips for the sheep, mangels for the cattle, carrots for your horses, artichokes for the pigs, and potatoes for the family.

Grow flax occasionally. The straw of it is more than twice as good as any prairie hay; stock like it; it is chinch proof.

Grow more fruit, especially small fruits. There is no sense in your living so long without fruit, waiting for apples to grow.

Try onions; try everything that the chinch bug doesn't like and that is not so dependent on summer rains.

Along the Arkansas river, from Hutchinson to Great Bend, I saw (and probably they may be found all along the river) many tracts very suitable for the Osier willow. This is, I should think, certainly worth the attention of those owning wet, low lands, and especially lands which could be or are sometimes overflowed.

This brings me to a subject that I must defer to another letter; one that I studied a good deal while there in my wanderings, and one the practicability and importance of which I comprehend more fully now since I have taken a hand at it, and that is irrigation. I had studied it somewhat before, but can treat the subject more confidently now, and shall take pleasure in doing so.

J. G. IRWIN.

Hendricks, Col.

### What Does It Mean?

EDITOR KANSAS FARMER:—The questions of usury and high taxes are being generally discussed at the present time in Kansas, especially by the agricultural press and the farmers. With this fact in mind, and the equally plain fact that the bankers of the State are making strenuous efforts to control the next Legislature, I ask the question, What does it mean? Are the bankers afraid their time has come? or do they wish to remove every restriction of the law from their scheme of usury and tax-dodging? They are charging us from 2 to 3 per cent. per month for the use of money, while at the same time a bank with an advertised cash capital of \$50,000 pays tax on but \$10,000. It is reported that there are already sixty banker candidates for the next Legislature. Brother farmers, if this be true, is not this a pertinent question—What does it mean?

I make the suggestion that some farmer in the district to be represented, report to the KANSAS FARMER the fact where a banker is a candidate. The name of the individual or the party he represents is of no consequence. I report from Rice county one banker nominated by the dominant party.

Little River, Kas.

M. ARNOLD.

That distention of the stomach which many people feel after eating, may be due to improper mastication of the food; but, in most cases, it indicates a weakness of the digestive organs, the best remedy for which is one of Ayer's Pills, to be taken after dinner.

Fresh manure should not be used if it can be avoided, but should be composted and allowed to decompose. If placed on the land it must still undergo a change in the soil before it becomes plant food, which causes too much heat in dry weather.

The vicissitudes of climate are trying to most constitutions, especially to people having impure blood. For all such (and they constitute the majority), the best safeguard is Ayer's Sarsaparilla, the use of which cleanses the blood and strengthens and invigorates the system.

### Creameries and Dairies.

D. W. Willson, Elgin, Ill., makes a specialty of furnishing plans and specifications for building and operating creameries and dairies on the whole milk or gathered cream systems. Centrifugal separators, setting cans, and all machinery and implements furnished. Correspondence answered. Address, D. W. WILLSON, Elgin, Ill.

### The Golden Cross Wheat.

It has been sixteen years since the introduction of the Fultz Wheat in Pennsylvania and its cultivation rapidly extended into other States and proved a great boon to wheat-growers, but it is useless to disguise the fact that at the present day it does not give as satisfactory results as formerly, and there is a great inquiry among farmers for a wheat more productive, and more satisfactory in general results than the Fultz.

Herewith we illustrate the Golden Cross, a new variety, produced by crossing the Clawson on the Mediterranean. It is a well-known fact that millers mix the above two varieties to produce a high grade of flour.

What has heretofore been done artificially, nature steps in and gives the desired combination in a single variety. It is a very strong growing variety, exceedingly hardy and great stooler. Requires one-half bushel less per acre than Fultz and other similar sorts. Makes a very early, strong growth, attracting attention by its dark heavy foliage. Straw is large and very strong, it has never been injured by the Hessian fly. Head is large, broad and compact, with light beard. Most excellent grains, large size, color red; very flinty and always plump. Ripens early and weighs sixty-four pounds to the measured bushel. In the preliminary test, the Golden Cross was put in competition with Fultz, as this is the variety most generally cultivated throughout the country, and in 1886, the average of Golden Cross was 34.08 bushels per acre, Fultz averaged 28 bushels. In 1887 Golden Cross averaged 31 bushels, Fultz 20 bushels. These tests were made under exactly the same conditions for both varieties, and can be relied upon as showing the yielding propensities of the two sorts. It is being introduced by J. A. Everitt & Co., Seedsmen, of Indianapolis, Ind., who are already well known as the introducers of several valuable varieties of wheat.

The flesh of fresh fish should be firm, the gills should be light red, and the scales silvery.

Oats that have been cut in the milky stage and well cured before being stored in the barn, make excellent feed for horses if the straw and heads be passed through a fodder-cutter.

No heating manures, says the *American Cultivator*, should be used for root crops, except in case of beets and mangels. Manure from the hog-pen is especially undesirable, on account of its being so rich and heating.

"Seest thou a man wise in his own conceit; there is more hope of a fool than of him." It is the men who are open to conviction—who are teachable, who take hold of things out of the beaten track, and "Taking time by the forelock and not by the fetlock," go forward to success. To this latter class we desire especially to appeal and urge them to write to B. F. Johnson & Co., 1009 Main St., Richmond, Va., they will do you good and not evil.

### A Through Sleeper to Chicago.

Every afternoon at 3:55 o'clock, upon arrival of trains from the West, a magnificent Pullman Sleeping Car leaves Topeka for Chicago via the GREAT ROCK ISLAND ROUTE, making close connection with the famous "limited flyer" running through without change, arriving at Chicago the following morning. This is certainly the quickest and most convenient means of transportation between points in Kansas and the city of Chicago.

For accommodations in this car, please notify your local agent, and he will be glad to make such reservations as you may require by telegraph.





## WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Correspondence and remittances for the KANSAS FARMER on account of this Weather Department should be directed to C. C. Blake, Topeka, Kas. See advertisement of Blake's Almanac on another page.]

## WEATHER AND CROPS.

Can the people of Kansas ask any better weather predictions than we have given for the last three months? In the present state of our knowledge we do not think it is possible for any one to make predictions that will prove to be more accurate than we have made. In this paper for June 14 we said: In Kansas the rain will be rather streaked in July, and while the total amount will be rather less than the average for July, yet, taken in connection with the rains that will occur in June, we think there will be enough to keep the crops growing nicely in nearly all places. Some few small localities may be missed by the rain; but we think there will be very few spots during June and July that will have no rain for thirty days at a time. We do not look for general rains, but think they will be more local, and frequent enough to cover nearly all localities at short intervals; hence we do not look for any general drouth in June or July." We also stated that the temperature would be fluctuating in the early part of July on account of more or less cloudiness, but that it would be hot the last of July.

In the KANSAS FARMER of July 5, we stated that eastern Kansas would have considerable rain during the first half of August, with not quite so much in western Kansas. The facts now show that during the first two-thirds of July the weather was fluctuating, being warm, then a rain and cooler, and so alternating in strips till past the middle of the month, when it became clear and hot till the end of July. At no time during the month was there a general rain in Kansas, but all the rains were streaked; and nearly all parts of the State received some rain during the last of June and in July, so that but few places suffered much from drouth, though the total rainfall for the State in July was a little less than the average for that month, as we had predicted.

But the last of July and the first days of August were so hot that the moisture evaporated rapidly, and people began to fear a long drouth had commenced. Their fears were speedily drowned out by the heavy rains which came August 3, 4 and 5; though in some parts of western Kansas there was not so much as needed, while the eastern two-thirds of the State had heavy rains, as we had stated would be the case during the first half of August. In three-fourths of the State the corn crop will mature without more rain; but while eastern Kansas has had her share for the month, yet the State will have more rain before the month is out, and especially during the last part of August, though we will have considerable fair and warm weather with some moderately cool spells but no frosts in Kansas. We stated that a few places would be missed by the rains, and we expect that a few counties will make only a partial crop; while nine-tenths of the counties will make very large crops. It is, however, poor consolation to a man who has lost his crop by drouth to tell him that all his neighbors had plenty of rain and good crops. Even if we could figure fine enough to predict the exact counties that would lose their crops by drouth, the farmers, editors, bankers, merchants and real estate dealers there would hardly thank us for throwing a wet blanket over their prospects and hopes early in the spring. They would say: "Where ignorance is bliss, 'tis folly to be wise," as was the case with the boy floating down toward the Falls of Niagara. But after harvest they would say: "Give me a little more certainty, and less short-lived bliss."

To give them this certainty (insurance) is just what we are working for, and while we are doing our best to insure all the people of Kansas a good living, we think it is but common fairness that they insure us a living by favoring us with their patronage.

We wish to urge farmers to prepare for putting in a large crop of winter wheat while the ground is moist enough to cultivate. A subscriber from Greeley county writes to ask if we advise farmers there to plant winter wheat this fall. We cannot say that we do, as we do not know whether winter wheat is adapted to the soil and climate of that

county. But the farmers in each county know whether winter wheat usually does well in their locality if it is a favorable season for the State. Our statement is that it will be a favorable season for winter wheat in Kansas; but each man must judge as to whether his locality is a favorable one for winter wheat. Probably there are some counties or townships in the State where winter wheat never does well. We certainly would not advise farmers to sow winter wheat in such places. There may also be places where the chinch bugs are too thick, so that it is not desirable to sow wheat till late; but where there is not some special objection, we think it will be best to sow the wheat by the last of August or first of September, as in parts of the State, especially in the western third, it will be pretty dry later in the fall and then it might not germinate till the early part of winter, when it would stand a pretty good chance of being winter-killed or spring-killed, while that sown in August and first part of September would be well-rooted and covered with a nice mat so that neither winter nor spring will harm it.

As we stated in a former article, we prefer putting in as much as possible among the growing corn for many reasons. Our experience in Kansas has been that it does not harm the wheat to pasture it when the ground is not too soft, but that it rather helps it if it is not pastured too late. But this experience was on bottom land in Shawnee county, and we do not know that it would apply elsewhere.

Winter wheat is ready for market, when threshed from the shock, a full month before spring wheat can be marketed. In July, 1888, we think wheat will command a high price, unless the "bears" do a large amount of unnatural hammering; and think that Kansas farmers can sow a large crop of winter wheat this fall, reap 50,000,000 bushels next June, thresh it from the shock next July, and sell it for a good price before spring wheat is ready for market.

## FOREST FIRES.

OTTAWA, ONT., August 3.—The city is completely enveloped in smoke from forest fires which are raging in the surrounding country. St. Joseph's village, of about 500 inhabitants, six miles from this city, is nearly surrounded and the inhabitants are preparing to flee for safety, as it is believed the village is doomed. A telegram says that for an area of five miles around Canadian Junction on the Canadian Pacific railway the fire has full control, consuming houses and everything lying in its course. The loss is believed to have reached nearly half a million dollars.

June 14 we predicted a drouth in Ontario for the last part of July. As that province is nearly surrounded by the great lakes and great rivers, as well as being richly supplied with small lakes and ponds, it follows that it should receive during the summer months the greatest amount of rain if inland evaporation could increase the precipitation in the vicinity. But Ontario is notoriously one of the driest places on the continent east of the Rocky mountain slope.

## KANSAS WEEKLY WEATHER REPORT.

Furnished by the Kansas Weather Service.

Abstract for the week ending Thursday, August 2:

**Precipitation.**—During the week ending August 2, there was a heavy rainfall in Johnson, an excess in Douglas, Leavenworth and Wyandotte; an average in Doniphan, Atchison and Jefferson, while over the rest of the State there was scarcely any rain. But the week closes with a better prospect in many sections.

**Temperature and Sunshine.**—It has verily been a week of heat and sunshine, both predominating.

**Results.**—Late corn, and corn that has not been properly attended, has suffered to a greater or less extent in all the counties outside of those receiving the rain this week. In the counties inclosed by the great bend of the Arkansas all corn is greatly injured. In the southeastern counties, and in the counties of the extreme southwest, extending thence northeast through Stafford to Harvey, thence north through Osborne and Mitchell, the long dry spell has reduced the corn, hay and potato crop outlook materially.

About one-half of the corn over the State was planted early; this and listed corn are still doing well but need rain. In Gove some late corn has been cut to save the fodder. In Saline the high ground corn is suffering the least. In Morris, chinch bugs are hatching out in immense numbers. Many observers in

closing their reports state that clouds are appearing and rain is promising.

T. B. JENNINGS,  
Signal Corps, Asst. Director.

## TOPEKA REPORT.

Abstract for the week ending Saturday, August 4, 1888:

**Temperature.**—Highest at 2 p. m., 97° on Thursday the 2d; lowest at same hour, 78° on Saturday the 4th. Highest recorded during the week, 100° on July 30th and August 3d; lowest, 61° on the 4th.

**Rainfall.**—Rain fell one day—Saturday, August 4th—64 hundredths of an inch.

## Jackson County Horticultural Society.

Special Correspondence Kansas Farmer.

I am pleased to announce to the readers of the KANSAS FARMER that the above-named association is about to arouse from its inactivity, and enthusiastically and energetically come forth in a "newness of life." And why should it not? Composed as it is of some sixty of the leading horticulturists of one among the best fruit counties of the State, I only wonder that they should permit themselves to decline into such a state of careless indifference.

At the last meeting held in Holton, on Saturday, August 4, it was unanimously decided that the association make a display of their choicest fruit at the coming State Fair. In order to insure success a committee consisting of the most successful fruit-growers was appointed and instructed to gather exhibits from all parts of the county and deliver the same at Holton, September 14, for inspection and necessary preparation.

After discussing the best manner of preparing various kinds of fruit it was decided to hold the next meeting at Holton, September 14, at which time and place the exhibit is to be received and prepared for shipment.

It is to be hoped that this association will carry out its present intentions and energize itself and soon become one of the ablest and most successful associations of its kind in the State. An association cannot dream itself into success. Like individuals, it must forge into it. Fortune smiles on those who roll up their sleeves and put their shoulders to the wheel. Toil is the price of success.

J. S. SOULE.

## Gossip About Stock.

Our old stalwart advertiser, Hon. T. A. Hubbard, Wellington, Kas., reports the pig trade as excellent. Last week, among other sales, he sold four males to head herds.

Remember that we can supply "Haaff's Practical Dehorner," the best book on the subject ever published, for only \$1.25, or we will send it and the KANSAS FARMER one year for only \$2.

Messrs. W. P. Higinbotham and Bill & Burnham will make a sale of seventy Shorthorns during the California State Fair at Sacramento, with Col. S. A. Sawyer as master of ceremonies.

Rix & Goodenough, of Topeka, have received a fine importation of twenty-eight Shire and Clydesdale stallions, and have enroute a lot of Percheron stallions. This firm have a splendid reputation and are building up a first-class business.

The Kansas City stock yards receipts of cattle last week numbered 31,963, the largest receipts ever known for any week. They were mainly rangers. The total receipts for 1888 to August 4 are 419,643 cattle, 1,249,919 hogs and 178,661 sheep, showing a gain of 125,438 cattle, 179,317 hogs loss and a gain of 56,913 sheep compared with 1887.

We are gratified to note that the rapid growth of business of our old advertisers, James H. Campbell & Co., have necessitated the increase of capital and working force. The firm is now incorporated as The James H. Campbell Company, Live Stock and Commission Merchants, with offices at Kansas City stock yards, also at East St. Louis and Chicago. They are now making a specialty of the sheep trade.

Our first page illustration this week is of the famous Poland-China boar, Stemwinder 7971, farrowed April 28, 1884; sire Look-No-Further, dam Daisy Fox. Stemwinder now weighs 800 pounds, after being used up to the middle of June. He stands upon his

## THE ONLY Brilliant Durable Economical DYES

Are Diamond Dyes. They excel all others in Strength, Purity and Fastness. None others are just as good. Beware of imitations. They are made of cheap and inferior materials and give poor, weak, crocky colors. To be sure of success, use only the DIAMOND DYES for coloring Dresses, Stockings, Yarns, Carpets, Feathers, Ribbons, &c., &c. We warrant them to color more goods, package for package, than any other dyes ever made, and to give more brilliant and durable colors. Ask for the *Diamond* and take no other.

Send postal for Dye Book, Sample Card, directions for coloring Photos., making the finest Ink or Bluing (10 cts. a quart), etc. Sold by Druggists. Address **WELLS, RICHARDSON & CO., Burlington, Vt.**

For Gilding or Bronzing Fancy Articles, USE

## DIAMOND PAINTS.

Gold, Silver, Bronze, Copper. Only 10 Cents

feet like a pig. The owner, F. M. Lall, of Marshall, Mo., is one of the foremost breeders of that State and has a large patronage in Kansas. Mr. Lall has 120 pigs for this season's trade, sired by such boars as Stemwinder, Give or Take 1677, Seldom Seen 10051, Adam 4299, The Duke 4551, North Star 6001, Moorish Prince 5943, etc.

## \$85 SOLID GOLD WATCH FREE!

This splendid, solid gold, hunting-case watch, is now sold for \$85; at that price it is the best bargain in America; until lately it could not be purchased for less than \$100. We have both ladies' and gents' sizes with works and cases of equal value. **ONE PERSON** in each locality can secure one of these elegant watches absolutely FREE. These watches may be depended on, not only as solid gold, but as standing among the most perfect, correct and reliable timekeepers in the world. You ask how is this wonderful offer possible? We answer—we want one person in each locality to keep in their homes, and show to those who call, a complete line of our valuable and very useful HOUSEHOLD SAMPLES; these samples, as well as the watch, we send ABSOLUTELY FREE, and after you have kept them in your home for 2 months, and shown them to those who may have called, they become entirely your own property; it is possible to make this great offer, sending the Solid Gold Watch and large line of valuable samples FREE, for the reason that the showing of the samples in any locality, always results in a large trade for us; after our samples have been in a locality for a month or two, we usually get from \$1,000 to \$5,000 in trade from the surrounding country. Those who write to us at once will receive a great benefit for scarcely any work and trouble. This, the most remarkable and liberal offer ever known, is made in order that our valuable Household Samples may be placed at once where they can be seen, all over America; reader, it will be hardly any trouble for you to show them to those who may call at your home, and your reward will be most satisfactory. A postal card, on which to write us, costs but 1 cent, and if, after you know all, you do not care to go further, why no harm is done. But if you do send your address at once, you can secure, FREE, AN ELEGANT \$85, SOLID GOLD, HUNTING-CASE WATCH and our large, complete line of valuable HOUSEHOLD SAMPLES. We pay all express freight, etc. Address, STINSON & Co., Box 101 Portland, Maine.

## Inquiries Answered.

**HEDGE FENCES.**—Is there any law in Kansas requiring hedge-owners along the public highways to keep same out a certain height? —No. There was such a bill before the Legislature, but it did not pass.

**IRRIGATION.**—I noticed "Stewart's Irrigation for Farm," etc., advertised in your columns. Have you nothing less expensive that would give all necessary information on that subject, so far as applicable to this section of the State? —Write to Hon. Norman J. Colman, Commissioner of Agriculture, Washington, D. C., and ask for Hinton's Report on Irrigation in the United States.

**NAVEL OF COLT.**—I have a female colt, three months old, which has a little sack about an inch long hanging at the place of navel. On examination, found a little hole into the entrails. Must I do anything for it, or will it get well itself? —If there is no veterinary surgeon near, let any good physician see the case. It needs attention, and none but a skillful person should undertake the needed work. The trouble was caused by some accident—sudden pressure, or stroke, or straining in running or jumping before the cord was well healed.

## Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged by good cheer and try Hood's Sarsaparilla. It has cured hundreds; it will cure you.

## Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar



## 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.

### Night Cometh.

"For the night cometh when no man can work."  
Night cometh, from over the mountains  
Its shadowy feet  
To the forests, the fields and the fountains  
Come faintly, but fleet,  
Night cometh, and one hath his labors half  
done,  
As he waits by the roadside at setting of sun.  
Night cometh, and on over the meadow  
It quietly flows,  
And hides in the wave of its shadow  
The clover—the rose.  
Night cometh, and one with his spade in his  
hand  
Sits weeping in darkness he can't understand.  
Night cometh; the waves of the ocean  
That shine in the sun  
Are heavy and sombre in motion;  
Their glory is gone.  
Night cometh, and one there is wringing his  
hands,  
And sighing "Too late!" as he sits on the  
sands.  
Night cometh, and with it the riot  
Of daylight goes down;  
The stars in their shining bring quiet  
To village and town.  
Night cometh! how many in field and in street  
Lie down with the work of their life complete?  
—Gwendoline, in Chicago Current.

As year succeeds to year, the more  
Imperfect life's fruition seems;  
Our dreams, as baseless as of yore,  
Are not the same enchanting dreams.  
The girls I love now note me slow—  
How dull the boys who once seem'd witty!  
Perhaps I'm getting old—I know  
I'm still romantic—more's the pity!  
—George Elliot.

Know, whate'er  
Beyond its natural fervor hurries on  
The sanguine tide; whether the frequent  
bowl,  
High-seasoned fare, or exercise to toil  
Protracted spurs to its last stage tired life,  
And sows the temples with untimely snow.  
—Dr. John Armstrong.

All that cheers or softens life:  
The tender sister, daughter, friend and wife.  
—Pope.

### CUBAN CUSTOMS.

The prospect was an exhilarating one and repaid for the grotesque way ourselves and ponies were accoutred. A pack mule hidden beneath serons, rush-woven panniers and huge head-gear, upon which bounded and floated big woolen tassels, was laden with some grain for our beasts, a little charcoal urn for melting lead and cooking food, bullet molds, lead bars, cutlery, any number of grass-woven ropes for tethering ponies and tying our leash of dogs, steels and flints and bunches of dried corn tassels for striking fires, a few such edibles as might be carried, and pieces of old canvas for protection from the dews at night, should we happen to miss the cabins of the peasantry. Don Manuel, myself and Jose, the vaquero, who was a master of Cuban woodcraft, and who accompanied us as servant and guide, were each provided with a savage machete, a smaller but none the less ugly knife, a tremendous revolver, and a rifle whose weight, length and proportions were appalling. Notwithstanding the don's assuring remark, my own trepidation was discovered, as I could see from the merry twinkle of Jose's eyes. And this led, as we wended our way for miles through the little mountain valleys, to the revelation of a fact which is not generally known outside of Cuba. This is that in the entire island there is not an insect or serpent whose sting or bite is fatally poisonous, nor a single wild beast, in all its forests, which will attack man. The general idea is quite the reverse. Among the reptiles the most dangerous is the alligator, which will always run if it has half a chance, or will only devour a human being when prostrate and helpless; while among the wild animals, only one will fight savagely. This is the wild boar, and it will never attack a man first. It must be brought to bay by dogs. Then, as our little party experienced in good time, it becomes a sort of howling, concrete whirlwind filled with fire and set with fangs.

During the first day of our excursion our quest was rewarded with nothing in the shape of deep-wood sights or tenantry, though the very earth seemed filled with songs and calls of negritos, mayitos, caberos, zorales, totises, chinchinguacos, solviros, pitoreras, savaneros, canaries and mocking

birds, which frequent the more open districts and plantations, trees and hedges; but as we neared the denser forests, along towards nightfall, we came upon a little settlement of people well worth going a long distance to know. These were the Cuban carboneros and charcoal burners. As all of the cooking, and much of the manufacturing requiring heat, in the Cuban cities are done with charcoal, charcoal burning provides a sort of a livelihood for a small and picturesque class, who fell timber and burn charcoal at will in the countless island forests. These carboneros comprise some queer people. Most of them are inoffensive and hospitable, but many are refugees from the late revolution, for the Spanish soldiery deem it wise not to disturb anybody in these almost inaccessible haunts. So, aside from insurgent refugees, in nearly every carbonero's camp will also be found, if you happen to be in company with those whose sympathies are with a certain flag which waved defiance to the hated Spanish red and gold over the blood-swept fields of Camaguary, here and there a noted bandit who could never be taken from among his swarthy friends. I found other than these of interest. They were gitanos, or genuine Spanish gypsies, who, forming more than half of the grimy settlement, lived and labored and loved in these matchless forests, all unknown as gypsies among their Cuban brethren. Our party was known, and we were received with every manifestation of delight. The best cabin was set aside for us; our horses were tethered and cared for; water was brought from a cool repressa or spring, for washing in ponderous ewers; cheap wine, aguardiente and tobacco in extraordinary quantities were provided, queer, big-eyed and half-naked muchacos and ninas gathered around us; looked, wondered, and with silvery bursts of laughter fled to their mothers, or the forests for recovery; a supper of such proportions, variety and grotesqueness was provided as never before greeted the eyes of civilized man; and during the long evening these half-wild happy-hearted men and women—the latter digging out of odd corners of shadowy old cabins many a bauble and bit of finery for the unusual occasion—danced for us and with us, upon the grimy, smooth-worn ground such hilarious zapateos, such outlandish Habaneras and such grotesque fandangoes as no fervid pen can describe or even lax moralist approve. It was a gypsy scene indeed, lacking only the hooded tents and the circling, huddled wagons; for here and there the charcoal fires flared as gypsy camp-fires do; myriads of fire-files wove warp and woof of gold across the dark outline of the jungles; half a hundred swarthy forms whirled in the half-lights and shadows; and the glowing stars, pulsing in their tropic fires, shone through the weird, dark plumes of tropic verdure above.

The next morning after "coffee" at the carboneros' camp we set out at a very early hour. We had reached the San Juan river, and following its course for a rapid ride for a dozen or more miles came to a series of wide, low bayous, or lagoons, which set back from the river in some places for miles. These were filled with all manner of luxuriant tropic vegetation, and reeds similar to those from which the Guinea valley takes its name, interspersed at intervals with stretches of wild cane. Here and there great drifts of moss hung from limbs of gigantic trees to the very surface of the still lagoons. The silence of the locality was something wonderful. Strange birds with long, gaunt bodies and trailing legs, circled dolorously above. Not a ripple broke upon the surface of the silmy bayous. The reeds were straight and still. The gray moss was motionless in the shadows. The dogs kept close to our horses' heels, and when we halted and tied the latter, crouched close and silent beside them. I had noticed Jose at work upon some old pieces of blackened canvas. When we dismounted he removed his sombrero and put one of these upon his head, lacing others in the waist of his loose blouse.

"Come," said Don Manuel, "we will show you how harmless alligators are when you know them, and what a simple thing it is for Cubans to kill them."

Moving stealthily along the edge of the lagoon, we suddenly heard here, there, beyond, and again as if all about us, heavy splashes into the water, and the quick parting and subsequent trembling of countless

swaths of reeds showed where unwieldy objects had made startled passages. We were among a school of alligators. How many? "Well, maybe several thousand within a square mile!" answered the don complacently. Jose had a tremendous guabrahaca clumped stick as large, almost as heavy, and quite as strong as a crowbar in his hand. At a word from Don Manuel he glided forward and flung himself in a reclining posture on a firm bit of ground perhaps fifty feet from the edge of the lagoon, while the don and myself hid in the edge of the jungle. An almost unendurable silence of perhaps half an hour ensued. Then gentle splashing among the reeds were heard. These were shortly followed by many soft half-whistled gruntings. Directly the heads of two alligators parted the reeds near where Jose lay motionless. For a time these were also motionless as an Oriental study in bronze. Then the bodies followed, slowly and cautiously at first, but soon with incredible rapidity they moved upon Jose. I believe I was never so apprehensive and excited in my life. "Silence!" hissed Don Manuel. Instantly one flopped about, scampered to the land-edge, and whisked himself into the bayou. But the other with snapping eyes and quivering jaws was bent on having Cuban meat for breakfast. In another instant he was at Jose's side. The latter bounded into the air like a rubber ball. Flinging his canvas hat into the alligator's jaws, which snapped and crunched it hideously, the guabrahaca stick whistled through a wide air-circle, and descended with a crash into the reptile's skull. Before its first quiver and sprawl Jose's machete was through its shoulders a foot into the solid soil beneath, and this bull alligator, seventeen feet in length, was dead. Three alligators were despatched in this remarkable way; another ride of a dozen leagues brought us to an almost impenetrable forest at the base of the Trinidad mountains; we passed our second night with mountaineers who had never before seen civilized man or even set eyes on a Cuban city or pueblo; and on the morning of the third day, leaving our horses, and one of our dogs which had been disabled, with our mountaineer friends, plunged into a trackless Cuban forest.

Contrary to my expectation, the deep-wood soil is barren of low vegetation. I can perhaps best describe it as almost a counterpart of the shadowy coverts of Maine pine woods. The earth is bare, brown-black, soft and still as a carpet of velvet. And the silences have a deeper and intenser solemnity. You never see the sky. At long intervals away up there a hundred feet or more may be discovered a sheen like a delicate mist of saffron; but this never pierces the wondrous foliage. In time one's eyes become accustomed to the weird gloaming, and the senses painfully acute to every distorted sound or seeming.

One of our first experiences was a thrilling one to me and cost the life of one of our two remaining dogs. These forests abound in the hutia, a lazy animal similar in appearance to our gray squirrel, but with a rabbit-like face and a muskrat's tail. They feed upon nuts, buds and tender twigs, and are prized for food—indeed the insurgents of 1868 fairly subsisted upon them. A tremendous, stupid and fangless snake from ten to fifteen feet in length, called the maja, also feeds upon it, as was demonstrated to our sorrow. Several hutias had been shot. Tumbling to the ground like a ball of lead, the dogs, which were a cross between the Newfoundland and the Spanish mastiff, would grab them and with one whirl fling them ten feet in the air. They were fairly wild with sport. Another hutia had been treed. The dogs, standing at the foot of a slender mahogany, were springing and whirling in delirious expectancy. Suddenly there was a terrific commotion in the top of the tree, and following this, with a frightful crash through the leaves and limbs, a huge maja, writhing and floundering in the air, fell to the earth, breaking the back of a dog which had seemed unable to move in its excited fascination. We dispatched both the poor brute and the loathsome serpent, which, stunned by its own fall, lay limp within the hole in the soft earth its own weight had forced. It had climbed this mahogany by coiling, and in springing upon its victim, the little hutia, had overleaped its distance.

The woodcraft of our vaquero, Jose, had many extraordinary illustrations. Striking

his machete into a beautiful tree, he brought it forth, ejaculating most dramatically, "Mira! la sangre de la Doncella!" ("See! the blood of the Virgin!") The blade was dripping with blood-red sap of a red wood known as carne de Doncella, or Virgin flesh. Again when we had become thirsty and could find no water, Jose knew a back door out of this dilemma. "Here is Aaron's rod!" said he. "I will give you water." With this he struck a large vine twice, severing a piece as big as one's arm from the parra cimarrona or wild grape, and from the mouth of the hanging tube we drank our fill of winey, refreshing sap. So, too, his seductive calls of the wild pigeons, of which we found four varieties, were astounding. He would first with his hands make sharp, loud clappings, grading these down to sounds as low as the soft flapping of wings. This would be followed by a vocal call, so like that of the wild pigeon, that one seemed nestling there above our heads. To these would come low, half-doubting answers from all about us, and, finally, the scurrying and rustling of the deluded birds above.

Discouraged in our quest for wild boar, we retraced our way toward the mountaineers' cabins. All the afternoon Jose had at intervals loosened our remaining dog and, giving a grunt in imitation of the wild hog, the wise animal had bounded out of sight, ventral lejos—or with nose upraised and "smelling far," as the Cubans have it, but had invariably returned without trace of our sought-for game. But suddenly, when not a mile distant from the mountaineers', he left us with a yelp and a spring, and away we all went pell-mell after him, myriads of disturbed owls spitting and shrieking above. A run of twenty rods brought us to the dog and a large black boar, thirty feet away, which had turned to protect the retreat of a herd of wild hogs scampering away behind. "Aqui esta un baraco cimaron!" ("Here is a wild boar!" shouted Jose, wild as the dog itself with delight. There stood the savage fellow, all head, bristling shoulders, legs, tail with plummy trembling ends, jaws and tusks, champing and cracking his jaws, from which great rolls of foam were already working, with a hideous sucking sound, a splendid picture of ferocious brute bravery. To one side and another he sprang as the dog crowded him. Then he would charge the dog and whirl in the air, scattering the earth like an exploded shell. Closer and closer crowded the two brutes, in air half the time, each bent on death, the dog frequently clearing the boar at a bound, and maddening him with savage snappings and lacerations of the shoulders or hams. Over and under went the dog with marvelous agility, frequently sending the boar four feet into the air; but every charge from the dog brought a still more savage counter-charge from the boar. I believe no such agile and ferocious movements were ever elsewhere seen. For forty feet in every direction the forest ground looked like a freshly-plowed field; and it seemed to my startled eyes as though a cyclone of dog, boar, mud, bark and froth had descended into the darkening covert. I frankly confess to flight to a near fallen tree upon which, to escape less than hanging, I do not believe I could have ordinarily vaulted. The Don and Jose became apparently a part of the cyclone, though no mortal eyes could have followed their movements or gymnastic. I do not know how long this lasted. I saw a flash of fire and through the roar of it all heard a shot. Then the whirlwind seemed to fall upon Jose. I saw the gleam of his machete somewhere in its very core. Then a Cuban yell went up that set the tree limbs vibrating. We tied our grass-woven thongs to the dead boar's shoulders and tusks, and when we had dragged him to the mountaineer's cabins, great flecks of foam streaked with blood still lay upon the brave fellow's jagged ribs.

EDGAR L. WAKEMAN.

### It is a Curious Fact

That the body is now more susceptible to benefit from medicine than at any other season. Hence the importance of taking Hood's Sarsaparilla now when it will do you the most good. It is really wonderful for purifying and enriching the blood, creating an appetite, and giving a healthy tone to the whole system. Be sure to get Hood's Sarsaparilla, which is peculiar to itself.

Send for a circular of the music department of Campbell Normal University, Holton, Kas.



## The Young Folks.

### The Sea-Shell.

I was an inland child; the hills  
Closed round our home their wooded walls;  
The world beyond was hid from me;  
I often dreamt what it might be;  
Longed with a child's impatient feet  
To tread the city's noisy street,  
And heard with yearning heart the call  
Of the unseen, far distant sea.

For in our quiet farm-house, kept  
Its ancient mantelpiece to grace,  
Was one large shell. I left my play,  
How many times, to steal away  
And take it gently from its place  
And lay its pink lips to my ear,  
The captive voice within to hear.  
How faint, yet clear, how sweet and low,  
It sang to me its ocean song!  
I listened till it seemed my own,  
That whisper from a world unknown!  
Like one returned from far away,  
The shell within its place I lay;  
The hills around rose high and strong;  
What though their prisoner I might be,  
I knew the secret of the sea.

—Wide Awake.

Brimful of learning, see that pedant stride;  
Bristling with horrid Greek, and puffed with  
pride!

A thousand authors he in vain has read,  
And with their maxims stuffed his empty head;  
And thinks that without Aristotle's rule  
Reason is blind, and common sense a fool.

—Bolton.

They beckon from their sunset domes afar,  
Light's royal priesthood, the eternal hills;  
Though born of earth, robed of the sky they  
are;

And the anointing radiance heaven distills  
On their high brows, the air with glory fills.

—Lucy Larcom.

Aromatic plants bestow  
No spicy fragrance while they grow;  
But, crushed or trodden to the ground,  
Diffuse their balmy sweets around.

—Goldsmith.

[From Youth's Companion.]

### LIFE IN THE ALPS.

BY PROFESSOR JOHN TYNDALL.

(Concluded.)

Climbers and their guides are not unfrequently carried away by avalanches, and many a brave man lies at the present moment undiscovered in their debris. Some years ago, a famous guide, and favorite companion of mine, was lost, through his allowing himself to be persuaded to attempt a mountain which he considered unsafe.

On the slope of this mountain, with the summit fully in view, a report resembling a pistol shot was heard by the party. It was the cracking of the snow. My friend observed the crack, and saw it widen. Tossing his arms in the air, he exclaimed, "We are all lost!"

The fatal rush followed in a moment, and my noble guide, with a Russian gentleman to whom he was roped, were dug, dead, out of the snow some days afterward. The other members of the party escaped.

I will now describe to you an adventure of my own with one of these avalanches. Five of us, tied together by a rope, were descending a steep slope of ice, covered by a layer of snow, which is always a position of danger. Through inadvertence, the snow was detached, an avalanche was formed, and, on it, all five of us were carried down at a furious pace. We were shot over crevasses, and violently tossed about by the inequalities of the surface.

The length of the slope down which we rushed in this fashion was about a thousand feet. It was a very grave accident, and within a hair's breadth of being a very calamitous one. A small gold watch, which I then carried, was jerked out of my pocket, and, when we stopped, I found a fragment of the watch chain hanging around my neck.

I made an excursion into Italy, returned after an absence of nearly three weeks, and, half jestingly, organized a party to go in search of the watch. The proverbial needle in a bundle of straw seemed hardly more hopeless, as an object of discovery; still, I thought it possible that the snow which covered the watch might, during my absence, have melted away, and the watch have been thereby brought to the surface.

An ascent of some hours brought us to the scene of our impetuous *glissade*, and soon afterwards, to our surprise and delight, the watch was found, on the surface of the snow. Its case must have fitted water-tight, for on being wound up it began to tick immediately. It is now in the possession of my godson.

Falling stones constitute another serious, and frequently fatal danger in the Alps. And here the goats, which roam about the upper slopes and gullies, often play a mischievous part. An incident of this kind, witnessed by myself, once occurred about midway between Chamounix and the Montanvert.

I was accompanied at the time by a friend and his son. A herd of goats were observed browsing on the heights above us. Their appearance suggested caution. Suddenly an ominous tapping was heard overhead, and, looking up, I saw a stone in the air. When-

ever it touched the ground, it was deflected, so that from the direction of the stone, at any moment, it was difficult to infer its final direction.

I called out to my friend, "Beware of the stone!" and he, turning towards his son, repeated the warning. It had scarcely quitted his lips, when the missile plunged down upon himself. He fell with a shout, and I was instantly at his side. The stone had struck the calf of his leg, embedding one of its angles in the flesh, and inflicting a very ugly wound.

By good fortune, a spring of pure water was at hand; a wet compress was rapidly prepared, and the wound was bandaged. Then, hurrying down to Chamounix, which was some 2,000 feet below us, I brought up men and means, to carry the patient to his hotel. Perfect quiet would have soon set everything right, but the premature motion of the limb was succeeded by inflammation and other serious consequences.

Slipping in perilous places is the most fruitful cause of Alpine disaster. It is usual for climbers to rope themselves together, and the English Alpine Club has taken every pains to produce ropes of the soundest material and the best workmanship.

The rope is tied around the waist, or is fastened to a belt clasp the waist of each climber. The rope is an indispensable accompaniment of Alpine climbing, and no competent mountaineer will recommend its abandonment. Prudence, however, is necessary to the use of it. The men tied together ought to be few in number. A party of three or four, including the guide, or guides, is, in my opinion, large enough. In a numerous party, there is a temptation to distribute responsibility, each individual tending to rely too much upon the others; while, in a small party, the mind of each man is more concentrated on the precautions necessary for safety.

Besides this, we have the terrible enhancement of the calamity, when the slipping of a single individual carries a number of others to destruction. It was a slip—by whom we know not—that caused the disaster on the Matterhorn which so profoundly stirred the public mind some years ago. On that occasion, one of the foremost guides of the Alps, and one of the best of gentleman climbers, lost their lives in company with two younger colleagues.

The fearful disaster on the Jungfrau this year was, doubtless, due to the same cause. Six strong climbers, all natives of Switzerland, succeeded, without guides, in scaling the mountain from the northern side. From the summit they attempted to descend the southern slope, the danger of which varies with the condition of the snow or ice. I had frequently wondered that no accident had ever occurred here; for, to an experienced eye, the possibility of fatal accident was plain enough.

On this slope the six climbers met their doom. They were roped together, and probably only one of them slipped; but his slip involved the destruction of them all. A few weeks after its occurrence, I inspected the scene of the disaster, saw the rocks down which the men had fallen, and the snowfield on which their bodies were found.

Their reaching the summit without guides proved them to be competent men. But they could hardly have accomplished the ascent without fatigue, and tired men sometimes shrink from the labor of hewing safe steps in obdurate ice. Neglect on this score may have been the cause of the accident. But this is mere surmise, the only thing certain being the mournful fact that, on the Jungfrau this year, six men in the very prime of life, went simultaneously to destruction.

On the fine October morning when these lines are written, we find ourselves surrounded everywhere by glittering snow. The river glacier and its flanking mountains are dazzling in their whiteness. After a period of superb weather, streaks and wisps of boding cloud made their appearance a few days ago. They spread, became denser, and finally discharged themselves in a heavy fall of snow.

But the sunshine rapidly recovered its ascendancy, and the peasants, who had already descended some distance with their cows and sheep, hoped that two days of such warmth would again clear their pastures.

They were deceived, for through the whole of yesterday the snow fell steadily and almost constantly. It interrupted the transport of our firewood, on mules' backs, from the pine woods nearly one thousand feet below us. This morning, however, I opened the glass door of our little sitting-room, which faces south, and stepped out upon our terrace.

The scene was unspeakably grand. To the right rose the peak of the Weisshorn, the most perfect embodiment of Alpine majesty, purity, and grace. Next came the noble Mischabelhorn surmounted by "the Dom." Right opposite rose the Fletschhorn, a rugged, honest-looking mass, of true mountain mould; while to the left of Napoleon's road, over the Simplon Pass, stretched the snow-ridge of the Monte Leone, which, no doubt, derives its name from its resemblance to a couchant lion. Soft, gleaming clouds wrapped themselves at times grandly round the mountains, revealing and concealing, as they shifted, melted, or were re-created, the snow-capped peaks.

About one thousand five hundred feet below us the white covering came to an end, while, beyond this, sunny green pastures descended to the Valley of the Rhone. From the chimneys of our cottage, a light wind carried a smoke in a southwesterly di-

rection; the clouds just referred to, being, therefore, to leeward, and not in the "wind's eye," did not portend bad weather.

To the north the peaks grouped themselves round the massive Aletschhorn, the second in height among these Oberland Mountains. Over the Aletschhorn the sky was clear, which is one of the surest signs of fine weather. On a morning as fair and exhilarating as the present one, but earlier in the year, Mrs. Tyndall and I, from the top of the Aletschhorn—a height of fourteen thousand feet—once looked down upon the summit of the Jungfrau.

The general aspects of the Alpine atmosphere, and, more especially, the forms and distribution of the clouds, are very different in autumn from what they are in early summer. The grandest effects of our mountains are, indeed, displayed when no tourist is here to look at them. To us, who remain, this is not altogether a disadvantage; for, like the poet's "rapture on a lonely shore," there is rapture, for the lover of nature, in the lonely mountain, and, as said by your own noble Emerson, "a radiance of wisdom in the pine woods."

I well remember, after the tourist season at Niagara Falls had ended, my deep delight in visiting alone the weird region of the "Whirlpool."

One striking feature invariably reveals itself here at the end of September, and beginning of October. From the terrace of our cottage we look down upon a basin vast and grand, at the bottom of which stands the town of Brieg. Over Brieg, the line of vision carries us to the Simplon Pass, and the mountains right and left of it. Naters stands in a great gap of the mountains, where meadows and pine-clad knolls stretch, with great variety of contour, up to the higher Alpine pastures. The basin has no regularly rounded rim, but runs into irregular bays and estuaries, continuous with the great Valley of the Rhone.

At the period referred to, valley, basin, bays, and estuaries, are frequently filled by a cloud, the surface of which seems at times, as levelled as the unruined surface of the ocean. A night or two ago, I looked down upon such a sea of cloud, as it gleamed in the light of a brilliant moon. Above the shining sea, rose the solemn mountains over-arched by the cloudless sky. Here your young imaginations must aid me, for my pen fails to pursue any further the description of the scene.

As I write, on a day subsequent to that already mentioned, a firmament of undimmed azure shuts out the view into stellar space. No trace of cloud is visible; and yet the substance from which clouds are made is, at this moment, mixed copiously with the transparent air. That substance is the vapor of water; and I take this beautiful day as an illustration, to impress upon you the fact that water-vapor is not a thing that can be seen in the air. Were the atmosphere above and around me at the present moment suddenly chilled, visible clouds would be formed by the precipitation of vapor now invisible.

Some years ago, I stood upon the roof of the great cathedral of Milan. The air over the plains of Lombardy was then as pure and transparent as it is here to-day. From the cathedral roof the snowy Alps are to be seen; and, on the occasion to which I refer, a light wind blew towards them.

When this air, so pure and transparent as long as the sunny plains of Lombardy were underneath to warm it, reached the cold Alps, and was tilted up their sides, the aqueous vapor it contained was precipitated into clouds of scowling blackness.

If you pour cold water into a tumbler on a fine, summer day, a dimness will be immediately produced by the conversion into water, on the outside surface of the glass, of the aqueous vapor of the surrounding air. Pushing the experiment still further, you may fill a suitable vessel with a mixture of ice and salt, which is colder than the coldest water. On the hottest day in summer, a thick fur of hoar frost is thus readily produced on the chilled surface of the vessel.

The quantity of vapor which the atmosphere contains, varies from day to day. In England, northeasterly winds bring us dry air, because the wind, before reaching us, has passed over vast distances of dry ground. Southwesterly winds, on the other hand, come charged with the vapor contracted during their passage over vast tracts of ocean. Such winds, in England, produce the heaviest rains.

And now we approach a question of very great interest. The condensed vapor which reaches the lowlands as rain, falls usually upon the summits as snow. To a resident among the Alps, it is interesting to observe, the morning after a night's heavy rain, a limit sharply drawn, at the same level along the sides of the mountains, above which they are covered with snow, while below it no snow is to be seen. This limit marks the passage from snow to rain.

To the mountain snow all the glaciers of the Alps owe their existence. By ordinary mechanical pressure snow can be converted into solid ice; and, partly by its own pressure, partly by the freezing of infiltrated water, the snow of the mountains is converted into the ice of the glaciers.

The great glaciers, such as the one now below me, have all large gathering grounds, great basins or branches, where the snow collects and becomes gradually compacted to ice. Partly by the yielding of its own mass, and partly by sliding over its bed, this ice moves downwards into a trunk valley, where it forms what De Saussure called "a glacier of the first order." Such a glacier resembles a river with its tributaries.

We may go further and affirm, with a distinguished writer on this subject, that

"between a glacier and a river there is a resemblance so complete, that it would be impossible to find, in the latter, a peculiarity of motion which does not exist in the former." It has been proved that, owing to the friction of its sides, which holds the ice back, the motion of a glacier is swiftest at its center; that, because of the friction against its bed, the surface of a glacier moves more rapidly than its bottom; that, when the valley through which the glacier moves is not straight, but curved, the point of swiftest motion is shifted from its center towards the concave side of the valley. All these facts hold equally good for a river.

Wide glaciers, moreover, are sometimes forced through narrow gorges, after which they widen again. At some distance below the spot where I now write, is the gorge of the Massa, through which, in former ages, the great Aletsch glacier was forced to pass, widening afterwards, and overspreading a large tract of country in its descent to the valley of the Rhone.

It is easy to understand that, with a substance like glacier ice, when some parts of it are held back by friction, while other parts, not so restrained, tend to move forward, tensions must occur which will break up the ice, forming clefts or fissures, to relieve the strains. The crevasses of glaciers are thus produced.

And here we have another conspicuous danger of the Alps. Crevasses have been the graves of many a gallant mountaineer. They are especially dangerous when concealed by roofs of snow, which is frequently the case in the higher portions of the glacier.

Of this danger my own experience furnishes examples not to be forgotten. Passing them by, I may mention that, during the present year, an esteemed English clergyman was lost upon an easy glacier of the Engadine, through the yielding of a snow bridge over which he was passing. The crevasse into which he fell could not have been deep, as he was able to converse with a companion above, and to make the tapping of his ice axe heard. He did not, as far as I know, complain of being hurt, but desired his companion to hasten to procure a rope. The distance to be passed over, however, before the rope and the necessary help could be obtained, was considerable; and when the rope and help arrived, the clergyman was dead.

A discussion followed in the newspapers as to the amount of blame to be assigned to the gentleman who went for the rope. It was said by one writer that he ought to have tied his clothes together, and, by their aid, to have drawn up his friend. The reader of Mr. Laurence Oliphant's last remarkable volume will remember that Mr. Oliphant was once lifted from a dangerous position by a device of this kind.

I never lifted a man out of a crevasse by a rope of clothes, but the lost guide to whom I have already referred, and myself, were once let down by such a rope into a crevasse, from which, by means of a real rope, which had been entombed with himself, we rescued a fellow traveler. Even with the best of ropes, it would require a very strong man above, and an extremely expert ice man below to effect a rescue from a crevasse of any great depth; so that I think but little blame was incurred by the omission of the clothes-rope experiment.

If censure be at all merited, it must, I think, be on the ground, that, having found rescuers, the gentleman failed to accompany them back to the glacier. He pleaded exhaustion, and it is a valid plea. With wider knowledge, however, he would probably have had himself carried to the glacier rather than remain behind. To a person dying of cold, time is everything; and time was probably lost by the guides in finding the particular crevasse in which the unhappy traveler was entombed.

Taking its whole tenor into account, the title of this article, instead of being "Life in the Alps," might, perhaps, with more appropriateness, have been "Life and Death in the Alps."

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Mr. Taylor's essay on "Civil Rights of Farmers," will appear next week.

A communication on "Wind-breaks" is received, and will be printed in our next issue.

Heavy rains fell in many parts of the State last Thursday, Friday, Saturday and Sunday. Saturday night and Sunday night the rain was preceded by heavy wind and great electrical display in this part of the State.

General Sheridan died at Nonquit, his summer home in Massachusetts, last Sunday night at 10:20. He was born at Somerset, Perry county, Ohio, March 6th, 1831. The cause of his death was what the physicians call "failure of the heart."

Mr. John Frick, at No. 6 Liberty Place, New York city, manufactures campaign jewelry for all parties. He was good enough to forward to this office a sample button which has a national flag in red, white and blue raised on the surface, surmounted by the names of the Presidential candidates. We doubt not Mr. Frick would gladly furnish all Kansas farmers with an outfit of campaign jewelry, and if there is anything in the world they need, it is that very thing.

Mr. A. Dawson, writing from Waverly, Kansas, encourages Prof. Blake, by indorsing the opinion several times expressed editorially in these columns, that Mr. Blake is engaged in a work of vast interest to farmers. As he says, many people believe Blake to be a mere guesser; but there is no guesswork about it. It is wholly a matter of calculation by mathematical methods. What the figures show, that, and only that, he publishes as the result. Never did any man work harder or more honestly than he does. He does not pretend to know enough yet to provide for small areas of country, but he knows he has mastered the problem of weather for large areas, and he expects to continue his studies until he can calculate as correctly for any one State as he now does for the United States.

## THE FARMERS' STATE ALLIANCE OF KANSAS.

Pursuant to a call, made through this paper by J. Burroughs, President of the National Farmers' Alliance, a delegate convention was called to meet at Lyons, Kansas, on August 2. Promptly on time, the convention was called to order with Mr. Burroughs as temporary Chairman, and Mr. D. T. Armstrong, of Wichita county, temporary Secretary. Credentials were recognized from Alliances in Stafford, Crawford, Morris, Marion, Wichita, Rice and Sumner counties. Other subordinate Alliances were unable to send delegates, yet were heartily in favor of forming a State organization.

The afternoon session was held at the Opera House, with an attendance of about 150 farmers. The first work was the adoption of a constitution for the Farmers' State Alliance of Kansas, which provides for offices of President, Vice President, Secretary, Treasurer, Executive Committee and Lecturer, and in case the Alliance may wish to work in secret session, it also provides for Assistant Lecturer, Chaplain, Door-keeper, Assistant Door-keeper and Sergeant-at-arms. All officers shall hold for one year. It also provides for county Alliances when there are not less than three subordinate Alliances.

Article III provides for organization, as follows:

SECTION 1. All the officers of the Farmers' State Alliance are authorized to organize subordinate Alliances, and said Alliances shall receive their charter signed by the President and Secretary of the Farmers' State Alliance, and sealed with its seal before they will be recognized.  
SEC. 2. The President, Secretary and Chairman of the Executive Committee may appoint and commission suitable Deputies, not to exceed one in each county, as organizers, who may represent the officers of the State Alliance in that capacity. In all cases where the distance traveled by said officer or Deputy shall equal or exceed fifteen miles he shall receive a fee of five dollars for each Alliance organized. For less than fifteen miles traveled his fee shall be three dollars; said fees to be paid out of the initiation fees received.  
SEC. 3. Applications for charters must be made directly to the Secretary of the State Alliance, and Alliances may be organized under his instructions. The secret work can only be communicated orally. The President of any subordinate Alliance in good standing which has adopted the secret work may transmit the same to any Alliance in good standing which desires it, and has so declared by a formal vote.

Purchasing and selling agencies are provided for in Article IV:

SEC. 1. The State Alliance and each county and subordinate Alliance may appoint purchasing and selling agents and establish relations with dealers and manufacturers for the purpose of securing merchandise, machinery, etc., of first hands, and of selling products direct to consumers, thus saving commissions and unnecessary middlemen's profits; provided that the State Alliance shall not engage directly in manufacturing or dealing in any products.

Article VIII, qualifications for membership:

SEC. 1. No person shall be admitted as a member unless he has been a resident of the State of Kansas for the three months preceding, and not then unless he be a farmer, farm-laborer, mechanic, country physician, or minister of the gospel, be of good moral character, believe in the existence of a Supreme Being, be of industrious habits, and over sixteen years of age. Wives and daughters of farmers and other ladies possessing the requisite qualifications, are also eligible to membership. Further, when any member of the Farmers' Alliance shall engage in any occupation which would render him ineligible before initiation, said member shall at once be dismissed from the Alliance, and furnished by the Secretary with a written statement of the cause of his dismissal. Provided, that the above shall not apply to members who may be selected as purchasing or selling agents under the supervision of the Alliance.

SEC. 2. No member shall be admitted to membership in more than one Alliance at a time.

SEC. 3. There shall not be any political or religious tests of membership.

Persons joining a subordinate Alliance shall accept and sign the following obligation:

I, A—B—, do say that I understand the objects and purposes of the Farmers' Alliance, and that I heartily approve of the same; that I have joined the Alliance of my own free will, and not from any selfish, improper or partisan motive; and I hereby pledge myself upon my sacred honor to labor heartily to accomplish the purposes of the Alliance; and to maintain a Subordinate Alliance; to faithfully attend its meetings; to perform to the best of my ability the duties that may be assigned me as a member of the Alliance; to promptly pay the dues provided for by the Constitution of the State Alliance, and not to impart to any unauthorized person any information of the business or working of the order.

The foregoing abstract of the consti-

tution shows the important features of general interest.

The election of officers for the State Alliance resulted as follows: President, I. M. Morse, White City, Morris county; Vice President, L. D. Herlocker, Farlington, Crawford county; Secretary, T. J. McLean, Peabody, Marion county; Treasurer, W. A. Burford, Cicero, Sumner county; Executive Committee—M. H. Dawson, Peabody; J. A. McFadden, Stafford; J. G. Jacobs, Peabody, and J. W. Gray and Sam Bethers, of Lyons.

Upon motion of D. T. Armstrong, of Wichita county, the following resolution was adopted:

Resolved, That it is the sense of this convention that the KANSAS FARMER, of Topeka, is requested to become the official paper of the Farmers' State Alliance of Kansas.

The Executive Committee selected the time and place of the next annual meeting for the first Wednesday in January, 1889, at Topeka.

Before adjourning, the following memorial was unanimously adopted and signed by all the delegates and farmers present:

To the Honorable Senate of the United States:

We, the undersigned, officers and members of the Farmers' Alliance of the State of Kansas and citizens of said State, respectfully represent—that at a meeting of the Executive Board of the National Farmers' Alliance held at Des Moines, Iowa, in March last, said National Executive Board did formulate a memorial asking Congress to enact a law to create a Department of Agriculture and make the same an executive department. That all the organized bodies of farmers in the United States have petitioned Congress to the same effect.

That one of the objects named in the constitution of the National Farmers' Alliance is the establishment of such a department.

That the House of Representatives at its present session, has passed a bill for the erection of such a department and that said bill is now pending in your honorable body.

Now, therefore, we you memorialists, do earnestly and respectfully request that your honorable body will take said bill from your file and enact the same into a law, to the end that the great agricultural interest of the country, which forms the basis of our national prosperity and produces the greatest proportion of our national wealth may have recognition in the government commensurate with its importance.

## Political Impertinence.

At the Republican Senatorial convention in this city last Saturday a resolution was introduced which, among other things, instructed the candidate nominated for State Senator, to support Messrs. Ingalls and Plumb for re-election to the Senate. That part of the resolution was wisely stricken out. Similar proceedings have been had in several Senatorial conventions in other parts of the State and the resolutions were adopted.

It appears to us at this distance that a resolution of that character at this time is impertinent. In the first place, the people have not considered the subject at all, and therefore the action of the convention is wholly without authority. In the second place it is too soon to take action of that kind. There is no knowing at this time what the people may want to do in the case when time for action does come. In the third place it embarrasses the gentlemen whose names are thus early brought out for re-election. It suggests to many minds a query whether the Senators are thus undertaking to forestall public opinion with the view of having the Legislature "fixed" in their interest.

We do not believe that either Mr. Ingalls or Mr. Plumb asked for such resolutions, and if they did the request ought to have been ignored. United States Senators are elected by State Legislatures, but it is the act of the people represented, and for that reason the people ought to be consulted. When the time for choosing a United States Senator draws near, the people will be heard from. If they desire Mr. Ingalls

they will say so plainly, and if they desire some other person they will find opportunities for making their wishes known. The same observation applies to the case of Mr. Plumb. Our own private opinion in the matter is, that neither of the gentlemen desire any such action at this time.

## Condition of Kansas Crops.

The Secretary of the State Board of Agriculture furnishes the following synopsis of his report for July 31:

Reports from about six hundred correspondents of this board, representing nearly every county in the State, show that while the wheat and oats crops are yielding a higher average than heretofore reported, the corn crop has naturally suffered from the effects of drouth and hot winds in many sections of the State during the last ten days of July.

Wheat—In many counties of the State considerable wheat has been threshed and the average yield per acre is found to be higher than it was estimated a month ago, making an estimated average of wheat per acre of eighteen bushels. From a breadth of 1,000,000 acres the estimated average of the State, will give a total product of 18,000,000 bushels.

Oats—The average yield of oats per acre for the State as estimated by our correspondents is thirty-two bushels. The acreage as estimated a month ago is 1,655,000 acres making at the average yield reported 52,960,000 bushels as the total oats product of the State.

Corn—The outlook for corn throughout the State has undergone a complete change since our last report, especially so in the last week of July and as serious damage has been done to this crop in many sections of the State since the reports were sent from which the summary below is made, the condition of the crop at this time is believed to be lower than the appended figures would seem to indicate.

## SUMMARY OF RETURNS FOR AUGUST 1.

Corn, compared with full average, 55 per cent.	
Potatoes, " " " "	.70 " "
Broomcorn " " " "	.88 " "
Flax, " " " "	.88 " "
Sorghum, " " " "	.90 " "
Millet, " " " "	.85 " "
Tame grass " " " "	.86 " "
Prairie grass " " " "	.90 " "

Rainfall and Chinchbugs—The following counties report a sufficiency of rainfall during the month of July and their corn in good condition:

Shawnee, Douglass, Wyandotte, Atchison, Jefferson, Brown, Doniphan, Jackson, Nemaha, Republic, Pottawatomie, Wabaunsee, Johnson, Linn and Osage. The remaining counties for the most part report dry weather for the latter part of July. Many counties report local showers so that while some portions of a county had good rains others are extremely dry. Hot winds have prevailed in many sections of the State, especially in the western portion, and this is the chief cause of damage to the corn crop.

The extent of this damage cannot be estimated at this date, but it is to be hoped that the general rains which are now watering our State may yet bring to life much corn which is now thought to be beyond redemption. Chinch bugs during all this dry weather are reported generally as doing but little damage and in many instances they seem to have disappeared entirely.

## Order Coal Early.

The State Board of Railroad Commissioners addressed a special request to every railroad company asking them to strongly urge their dealers all along their line and others who are able to do so, to lay in their winter supply of coal at an early date and not wait, as has frequently been done, until the commencement of cold weather, to get in their supply.



### ABOUT STORING WATER.

A good deal has appeared in these columns at different times in relation to collecting and storing water, and the advice of all the writers has been to make ponds and collect the water there. That advice is good; every farm ought to have one or more ponds and every one of them should be guarded and protected as much as the barn which contains stock and grain. The pond should be made intelligently with the view of having it one of the fixtures of the place; a good bottom, good banks with trees to protect them, and well guarded against tramping and kneading by feet of animals.

But a pond is only a pond, it is necessarily small when compared with the size of the farm, and it cannot be used, without great expense, to irrigate the fields which are near to it, besides, it requires a great deal of water—more than any person who has not considered the subject carefully would believe—to equal a good rain. A barrel of water—40 gallons, if spread out over a surface to the depth of one inch would cover only eight feet square, less than one-fourth of a square rod. It would require four barrels and one-fourth to cover one square rod, or 700 barrels to cover an acre one inch deep. A pond occupying the space of one-fourth of an acre would have a surface of 10,890 square feet; if the bottom was flat and level, one foot of water in the pond would be equal to 2,040 barrels, which would not be enough, even if it could all be removed, to water three acres of ground an inch deep.

Repeating, we say let every farm have one or more ponds for stock, for irrigation, for fish, for any use to which its waters may be applied. We wish, however, to suggest another way of storing which, for the purpose intended, will be worth more and cost less than ponds, because it will put the water, as it falls from the clouds, just where it will be needed in the crop growing season. It will save the expense of wind-mills and the labor of ditching. Our plan is this:

The ground which is to be used next spring for corn must be prepared the fall before, and in preparing it two, three, or four operations, as the character of the soil or the strength of team may make necessary. The thing to be done is to break the ground at least one foot in depth and as much deeper as possible, but to keep the soil in its natural position; that is, to keep the subsoil below where nature placed it. At least two implements must be used in perfecting the work, the first being a strong plow that will run eight to ten inches deep, run steadily, cut smoothly, and turn well without throwing the ground, scattering it over a wide surface. This requires a high and long mould-board with just turn enough to roll the earth over into the furrow last made. This plow must be followed by a subsoiler of any pattern which will break the subsoil and leave it in the furrow. If one operation with one subsoiler gets deep enough, that is sufficient, but if not, the operation must be repeated with that or with another implement. This broken subsoil is the place where we propose to store the water to be collected during fall, winter and spring, for use in summer. When the subsoil is broken to the required depth, then turn another furrow with the big plow, and subsoil again, so continuing until the ground is all broken. With two teams, one following the other, the work can be done as fast as one team would plow in the ordinary way. If a subsoiling apparatus can be attached to the plow, then one hand can do the whole work. An hour before stopping time in the evening, hitch to the harrow and level and smooth the

ground plowed during the day so as to prevent evaporation as much as possible.

This plan gives a storage basin under the entire field, where water will be collected as it falls during the fall, winter and spring, and where it will do more good than in any other place. Rain falling on unplowed ground does not soak into it readily; it is apt to run off, especially if the water falls in great quantities in a short time; and where ground is plowed, but the depth is only two or three inches, the loose soil is easily washed away in a heavy rain. In either case there is no water stored that will be available next year. But where the subsoil is broken, the water goes in to it through the surface soil and it stays there until warm weather, for there is not heat enough during winter to evaporate it. Several months this place is collecting water; it will hold a vast quantity, and it will be most active in the corn roots when hot weather comes—just when it is most needed.

Every farmer cannot follow this plan as to all his corn ground, probably, but there is no reason why it cannot be done in small measure by every man who pretends to raise corn. Any ingenious farmer can devise a subsoiling machine that will do the work, and if he has not the tools and materials, he can get workmen to do it for him at but little expense. Breaking the subsoil is what is to be done, not turning it or throwing it up to the surface; just break it and let it lie, moving it only as it must be done to break it. Any instrument that can be made to run steadily at a given depth will do the work, even though it be not more than two or three inches wide at the back part. The shape of the thing will depend on the principle of its operation. A little plow shaped like a wedge, so as to push the ground out from it as it goes through, without raising it; or one that will slide under like the nursery plow that runs under tree rows, will do. Break the ground and leave it in the bottom of the furrow. Every farmer can prepare a part of his ground in this way, and it will pay him well for his labor. Besides giving him water when he needs it, it will very greatly improve the condition of his ground for all agricultural uses. This will apply only where the subsoil is clay.

### Comanche County.

A friend in Comanche county writes us under date August 1, as follows:

"The hot winds are nettling on our crops and doing a great deal of damage to late corn in parts of the county, especially on sandy ground where it has not been tended well and is weedy. The early corn is out of danger, and we will raise a surplus this year. Listed corn is doing the best, and standing the drouth well. Cane never was better. Milo maize can't be excelled for a sure crop for feed; it is equal to alfalfa, which is also proving to be what it was recommended. Grass is good and many farmers are cutting. Millet is very good. Many are plowing for fall wheat and otherwise preparing to sow a large crop. This being a new county we have but little fruit, but young trees are looking well and are making a large growth this year. Wheat and oats are turning out only fair."

Bismarck Fair promises well this year. We are in receipt of a complimentary invitation to be present and see for ourselves. The Secretary, Mr. I. N. Van Holsen, says: "Special efforts are being made to make the Fair this year far surpass all former exhibitions, and with the bountiful crops that have already been harvested, and the promise of such an immense corn crop, we have

every reason to believe we shall succeed." The Fair opens September 3, and continues until the 8th.

### The Corn Outlook.

Reports are not as encouraging for last week as they were the week before concerning crops. In some localities, and especially where the ground was not well cultivated, corn was set back by the extremely hot weather. A correspondent from Chase county writes: "Corn promised well till about the 20th July; very dry and hot from that time on; for past five days thermometer ranged from 105 to 106 in coolest place to be found; corn literally cooked. Late corn a total failure. Early corn may make something." Another, in Grant county, writes: "Early-planted corn almost an entire failure, owing to dry, hot weather the latter part of June and early part of July, except in the extreme southern and southeastern parts of the county, where there were heavy local rains. Since July 12th showers over most of the county make late corn look fairly well. Rye very light. Millet generally poor. Sorghum, rice, corn and Kaffir corn may yet make an average crop. Pastures short."

These are the most discouraging reports we have; indeed, they are the only ones of that kind we have, though we learn from other sources that in some other places the corn was injured some. A great deal of rain fell the last three days of last week, and we may expect better reports this week. The crop of the State will not be quite as large as the indications ten days ago suggested, but we expect a very large crop of corn in Kansas this year.

### The Farmers' State Alliance.

In another place appears a full report of the organization of the Farmers' State Alliance of Kansas. The meeting was held at Lyons, Rice county, and was composed of delegates from local Alliances over the State, men who earn their living by farming; men, too, who are representative and intelligent and do their own thinking. Everywhere there seems to be a general desire for organization among farmers, and the Alliance is one of the favorite orders which is growing in strength all over the West. It is in full sympathy with the Grange and other kindred organizations. In selecting the KANSAS FARMER as their official paper they have simply done what almost every other association of agriculturists of this State has done. The farmers recognize that the KANSAS FARMER is the only paper which has labored incessantly and exclusively in their interest, and it has grown to be a factor of great influence in public affairs.

Since the organization of the Alliance about eight years ago the National Alliance has issued charters to 693 Alliances in Kansas. A number of these are inactive, but now that a State organization has been effected, it is proposed to organize in every county in the State.

Mr. I. M. Morse, of White City, President of the State Alliance of Kansas, has been a resident of Morris county eight years. He is a well-to-do farmer, possessing a good farm of 320 acres which he has acquired by successful farming. He was selected for this position much against his wishes. But his well-known influence and aggressive work in behalf of the Farmers' Alliance resulted in his selection for the position to which he promises his best efforts.

The Secretary of the Farmers' State Alliance, Mr. T. J. McLain, of Peabody, Kas., was a judicious selection for this most important office of the organization. His life work has been devoted to farming and teaching school. He is

a quiet, thoughtful and level-headed farmer of good education, who commands the respect of all who know him. Any information desired concerning the Farmers' Alliance will be promptly furnished upon application to him.

### Northern Seed Corn For Kansas.

Inquiries are made concerning the merits of northern grown seed corn for use in Kansas. This subject has been discussed in the KANSAS FARMER several times by correspondents and by the editor, and the opinion, as far as expressed is all favorable to the use of seed grown in regions farther north than this.

Several advantages are believed to be obtainable by the use of northern seed, among them earlier maturity and less stalk in proportion to ear. Our growing season is a month or two longer than that of Pennsylvania, Ohio, Iowa, or any other State in their latitude. The writer of this learned the art of farming in Cumberland Valley, Pennsylvania, where corn planting began, usually, about the 10th day of May. Kansas corn planting is begun at least a month before that and often longer, but our corn ripens very little if any earlier than it does farther north because our fall is a month later than theirs. Flour from new Kansas wheat is on the market every year in the latter part of June, but corn meal does not appear much before September unless the ears are dried in ovens. The fact, then, is that northern corn grows and matures in less time than corn does which is grown farther south. By using that kind of seed here, and by getting it fresh every year, we would gain something in time.

And then, another advantage is in the shortness of the northern stalk. Twelve feet corn stalks are common in Kansas; the ears often hang higher than a man's head. A shorter and smaller stalk, if the ear is large enough, would be better; and it is believed that this can be attained by the use of seed raised in the north.

This is a very interesting subject, and it is well worth a thorough discussion by men who have had experience or observation that will aid in reaching safe conclusions in relation to it. It would please all our readers to know what has been learned on the subject or what may be reasonably expected from a trial. Let us hear from the brethren.

### OUR VETERINARY DEPARTMENT.

The KANSAS FARMER has concluded arrangements with Dr. F. H. Armstrong, an educated veterinarian, now located permanently in Topeka, to take charge of our Veterinary Department. The Doctor is a graduate of Ontario Veterinary College, Toronto. He will answer questions by readers in cases where professional knowledge and skill are required.

This, we regard, as another valuable feature of the paper, and we doubt not the announcement will be received with approbation by our readers.

### Away Out West.

Our weather correspondent, in Greely county, Mr. S. B. Jackson, sends us the following report (dated August 2d) for July:

"Mean temperature, 80.1; highest 109 deg. on 4th; lowest, 52 deg., on 17th. Precipitation, 3.82 inches, well distributed."

REMARKS.—Pastures are green with second growth. Corn, cane, millet, broom and rice corn are in fine condition and bid fair to make  $\frac{3}{4}$  to  $\frac{1}{2}$  per cent. of a crop. Farmers have strong faith in the agricultural outlook of the new west and are preparing to sow all the winter wheat and rye possible.



## Horticulture.

### YOU CAN HAVE PEACHES.

Special Correspondence Kansas Farmer.

Last Thursday I had the pleasure of a visit to the Evergreen Fruit Farm of Messrs. Dixon & Son, Netawaka, Kas. This valuable property is situated about two miles northeast of the above named village, and is comprised of undulating prairie, rich in fertility, and in every way thoroughly adapted to the pursuit of horticulture, in which the father and son are especially interested. In fact, it would be quite difficult to better the location, as here is found almost any slope from which may be chosen the spot best suited for tree, bush, plant, or vine.

The residence and well-kept lawn command an attractive appearance to the passer-by, and the elevation gives a charmingly magnificent scenic view of the surrounding country for miles and miles away, something to be envied by all lovers of pure air, plenty of room and beautiful landscape.

The object of this visit was for the procurement of information regarding the care and other treatment of peach trees so that we could each season have the honor of eating peaches of our own production as in years gone by; for, of all fruits none are any better than the peach, nor are more sought after by the fruit-loving public than is this special favorite.

It has been truthfully said that horticulturists have no secrets, and I find this to be a self-evident fact, for of all classes the horticulturists are most willing and ready to impart unto their co-laborers and friends of fruitology that which has proven, by actual test, to be of practical value to the general production of an ample supply of choice fruit.

Having made a personal examination of the orchards of Messrs. Dixon & Son, and also of their method of growing and protecting peach trees so that fruitage would occur annually, I will proceed by stating that the first thing in order is to secure a desirable location, the best attainable is land sloping to the northeast, but should you lack in this respect, then select the highest lands you possess, and, after getting dimension of tract intended for the orchard, proceed at once to protect the same by planting a hedge of Norway spruce around the entire space set apart for orcharding; the Norway spruce is preferable to any other wind-break on account of its density.

It is best to plow the ground in autumn and again in the spring just prior to planting time. Plow deep. Use no fertilizer until the trees begin to bear fruit, then use quite freely by sprinkling around base of each tree potash, or wood ashes, to ward off insects and give tone and vigor to the trees.

The trees should be carefully selected, getting none but vigorous growers, free from disease and true to name. Plant shallow and in rows from eighteen to twenty feet apart each way. Lean each tree slightly to the southwest, and be sure that the roots of every tree planted are parted so that they will appear to the northwest and to the southeast, one-half each way—no roots to be left running toward the southwest, nor to the northeast. Excavate large enough to admit roots of tree without twisting or doubling up at ends. Firmly pack soil of rich porous nature around same and slightly mulch surface to protect from hot rays of the sun, and to retain all moisture necessary to unstinted growth.

Trees should not be older than one year to start with, and the preferable

are those budded in June, they being the most profitable and easiest handled. Use your own judgment as to variety, always bearing in mind that which is best suited to the locality in which you reside. Messrs. Dixon & Son have for early use the Amsden June, Waterloo, Arkansas, Foster and Shoemaker, and for late use the Bilyen's Late October, Reeve's Favorite and Shipley's Late Red. They are experimenting with many other varieties; however, recommend only those having been thoroughly tested. Others will be added to the list as they prove themselves of value to the producers and their adaptation to this section of the State.

Do not prune too heavily, but what is done let it be done on the southwest and northeast mostly, thus bringing the tree in fair shape so as to better assist in its protection when laid down. Start body of each tree low to ground. The orchard when planted should be cultivated to corn three years, then seeded to clover and kept mown often. Trees thus cared for are not affected with borers or other destructive elements, as if not so treated, and they live longer than trees do that are set out and cared for in the ordinary way.

The laying down process should take place during the first half of November each year. The service of two is required, and an abundant supply of slough grass hay or corn fodder, with plenty of heavy straw manure. The two men will lay and protect at least fifty trees a day by exercising care at every stage of the work. You begin by loosening all roots, if any, that may have grown on the northeast side of the tree, and then bend it to the southwest to an angle of about 40 deg., after which cover evenly to a depth of about six inches with slough grass hay or corn fodder; then spread over this covering, evenly, to a depth of about six inches, heavy straw manure for the purpose of excluding air, frost, cold and other atmospheric changes; thus proceeding until the entire orchard has been cared for, or as much as may be desired.

Take up or uncover about the middle of April, unless the spring is very early, and straighten to an angle of 45 deg. Should the tree not assume the desired angle, never mind as it is the fruit you are after, not the style of tree, and, after all the leaning tree is preferable, for trees leaning to the southwest protect all branches and the trunk from severe heat and blighting zephyrs of mid-summer.

When uncovering trees remove about one-half of the litter to a distance and leave balance to serve as a protection or mulch for the base of each tree, but before this is applied the soil should be slightly heaped about the body of each tree as an improvement to its prosperity. After trees have attained four or five years' growth they cannot be as readily laid as those younger, only one-half as many in a day. Old trees can be successfully laid, but it is always best to begin when young.

Aside from the peach orchard there is on this excellent farm one acre in strawberries, three in raspberries, three in blackberries, one-half an acre in plums, one in Russian apricots, eight in apples, one-half an acre in grapes, 100 currants, 100 gooseberries, about 500 Russian mulberries, and near 200 evergreens.

The entire family have my sincere thanks for the many favors received, and I would most heartily recommend a trial of their method of growing peaches, as well as other fruits. Choice fruit and plenty of it is the best physician that any family can possibly secure.

HORACE.

One dollar is all that we now ask for this paper one year.

### Apple Tree Root Lice.

EDITOR KANSAS FARMER:—I have reason to believe that in many localities the root lice are doing more damage to orchards than any other insects, causing thousands of trees to die while the owners are entirely ignorant as to the cause. In the State Horticultural Report for 1885, p. 161, I find a partial description of this louse, but so far I cannot get a very definite idea of its habits. Up to this date (July 28) I find no indications of their assuming a winged form as they are still on the tree roots and breeding rapidly. How many young a full-grown one brings forth, what is the natural limit to its life, or how they travel from place to place, I have no means of determining; but that they multiply rapidly without assuming a winged form I have positive proof, as I have seen the young one born while the old one was being examined beneath a microscope. The woolly aphid found upon the branches may be the same insect, being very similar, though covered more thickly with the white cottony substance that serves to cover and protect them and their young. Like the root lice each cluster is found to contain a few full-grown ones and many young ones of various sizes.

Please give us all the information you can as to how and when we can most successfully combat them. Also give the name of some reliable work on entomology that would be of practical use to farmers.

T. R.

Gardner, Kas.

### Decaying Apple Trees.

The following communication, prepared by Prof. F. Hawn, and addressed to E. J. Holman, President of the County Horticultural Society, will be read with interest by those interested in the subject:

For some years past, as you know, there have been growing opinions expressed in the Kansas and Missouri horticultural societies, that the decadence of our apple trees originated in the exhaustion of the soil, or "they were starving," with emphasis, as one enthusiastic member of the Kansas State society expressed it. Believing that the practice under such a construction would promote the evil I took strong grounds as you know against the reference and endeavored to show that the reverse was true—that the soil already too strong promoted a plethoric force and more often immature growths that could not withstand the severity of our hard winters, and thus sowing the seeds of disease that culminates in after years in the conditions we now see in the older trees all around us.

The Douglas County Horticultural Society, at a recent meeting, passed a resolution emphatically condemning this diagnosis, saying inferently "go on with your manuring."

Quite a medley in this starvation process occurs on my grounds, which had been in cultivation without manure, from the first year of the settlement of Kansas up to 1876, when I planted twenty-six apple trees. Four of these perished in their earlier days. Two succumbed after they came into bearing. Four more are now in their last stages, and will probably not survive the season. But I have a few others in very different condition. Three are nearly a foot in diameter and bearing a crop of splendid fruit. Two others were planted thirty feet apart, and their branches are now meeting, and a few others of like luxuriance, all the growth of twelve years after planting on grounds that have been closely cropped, without manure for twenty years before the planting of the trees and none afterward.

But what of the trees that have died, and are now perishing? Was it, is it starvation? Another question may be propounded.

## "Try Ayer's Pills"

For Rheumatism, Neuralgia, and Gout. Stephen Lansing, of Yonkers, N. Y., says: "Recommended as a cure for chronic Costiveness, Ayer's Pills have relieved me from that trouble and also from Gout. If every victim of this disease would heed only three words of mine, I could banish Gout from the land. These words would be—'Try Ayer's Pills.'"

"By the use of Ayer's Pills alone, I cured myself permanently of rheumatism which had troubled me several months. These Pills are at once harmless and effectual, and, I believe, would prove a specific in all cases of incipient

### Rheumatism.

No medicine could have served me in better stead."—C. C. Rock, Corner, Avoyelles Parish, La.

C. F. Hopkins, Nevada City, writes: "I have used Ayer's Pills for sixteen years, and I think they are the best Pills in the world. We keep a box of them in the house all the time. They have cured me of sick headache and neuralgia. Since taking Ayer's Pills, I have been free from these complaints."

"I have derived great benefit from Ayer's Pills. Five years ago I was taken so ill with rheumatism that I was unable to do any work. I took three boxes of Ayer's Pills and was entirely cured. Since that time I am never without a box of these pills."—Peter Christensen, Sherwood, Wis.

### Ayer's Cathartic Pills,

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Are those luxuriant trees now so flourishing in a normally healthy condition? The trees that have perished before them were once in an equally flourishing condition. Why did they die? Was it starvation? If so, why are the living ones flourishing? Let them answer.

In about the year of 1860 a citizen of Leavenworth planted with apple trees three acres of a five-acre lot on the outskirts of the city. The location is at the foot of the bluffs of the Missouri river valley, but not bottom land. It had received the wash of the slope for ages. The soil was strongly organic, including the residuum of decayed wood and leaves of trees which had grown on the bluff—rare elements in the regrowth of new and healthy trees. In addition to these fertilizers, twenty-five loads of manure from a dairy cow stable were applied. The trees grew after the similitude of the historic gourd. Their first fruits were fit offerings for the gods. In one of the years the proprietor realized \$500 on the crop. But alas! the trees and the fruit too soon began to fail, some dying outright, others perishing by degrees and those which have yet life in them have long since outlived their usefulness, though the soil is yet so prolific that on a recent visit I found a growth of weeds so luxuriant that they might have concealed an ox.

The orchard and the premises have been recently abandoned.—Leavenworth Times.



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## The Poultry Yard.

### The Latest Knowledge About Gapes.

The gape worm may be termed the *bele noir* of the poultry-keeper—his greatest enemy—whether he be farmer or fancier. It is true there are some who declare that it is unknown in their poultry yards—that they have never been troubled with it at all. These are apt to lay it down that the cause is want of cleanliness, or neglect in some way. But I can vouch that that is not so. I have been in yards where everything was first-rate—where the cleanliness was almost painfully complete—where no fault in the way of neglect could be found—and yet the gapes were there; and on the other hand, I have known places where every condition seemed favorable to the development of such a disease, and there it was absent—this not in isolated cases, but in many. No, we must look elsewhere for the cause.

Observations lead me to the belief that gapes are more than usually troublesome during a wet spring or summer following a mild winter. This would tend to show that the eggs from which the worm (that is in itself the disease) emerges, is communicated from the ground, from the food eaten, or the water drunk, in the first instance, but it is more than possible that the insects themselves may pass from one fowl to another. All this we can accept as a settled fact, and also any description of the way in which the parasitic worms attach themselves to the throats of the birds, and cause the peculiar gaping of the mouth which gives the name to the disease.

Many remedies have been suggested, and my object now is to communicate some of the later ones—thus to give a variety of methods, so that in case of the failure of one, another will be at hand ready to be tried. It is a mistake always to pin the faith to one remedy, for the varying conditions found in fowls compel a different treatment. The old plan of dislodging the worms with a feather is well known, and need not be described again. But I may mention that in this country some have found the use of an ointment, first suggested by Mr. Lewis Wright, I believe, most valuable. This is made of mercurial ointment, two parts; pure lard, two parts; flour of sulphur, one part; crude petroleum, one part—and when mixed together is applied to the heads of the chicks as soon as they are dry after hatching. Many have testified that they have never found this to fail as a preventive, and if the success is to be attributed to the ointment, it would seem as if the insects are driven off by its presence, for the application to the heads merely, would not kill the eggs.

Some time ago Lord Walsingham offered, through the Entomological Society of London, a prize for the best life history of the gapes disease, and this has been won by the eminent French scientist, M. Pierre Megnin, whose essay has been published by the noble donor. His offer was in the interest of pheasant breeders, but the benefit is not confined to that variety of game alone, for it is equally applicable to all gallinaceous birds troubled with this disease. The pamphlet in question is a very valuable work, and gives very clearly the methods by which the parasite develops. But for our purpose it will be sufficient to narrate what M. Megnin recommends for the cure of it.

These are various, as will be seen, and comprise the experience of other inquirers as well as himself.

He states that Montague obtained great success by a combination of the following methods: Removal from infested runs; a thorough change of food, hemp seed and green vegetables figuring largely in the diet; and for drinking, instead of plain water, an infusion of rue and garlic. And Megnin himself mentions an instance of the value of garlic. In the years 1877 and 1878, the pheasant preserves of Fontainebleau were ravaged by gapes. The disease was there arrested and totally cured, when a mixture, consisting of yolks of eggs, boiled bullock's heart, stale bread crumbs, and leaves of nettle, well mixed and pounded together with garlic, was given, in the proportion of one clove to ten young pheasants. The birds were found to be very fond of this mixture, but great care was taken to see that the drinking vessels were properly cleaned out and refilled with clean, pure water twice a day. This treatment has met with the same success in other places. Garlic in this case is undoubtedly the active ingredient, and as it is volatile, when taken into the stomach the breath is charged with it, and in this way (for garlic is a powerful vermifuge) the worms are destroyed.

Another remedy recommended by M. Megnin was the strong-smelling vermifuge *asafoetida*, known sometimes by the suggestive name of "devil's-dung." It has one of the most disgusting odors possible, and is not very pleasant to be near. The *asafoetida* was mixed with an equal part of powdered yellow gentian, and this was given to the extent of about eight grains a day in the food. As an assistance to the treatment, with the object of killing any embryos in the drinking water, fifteen grains of salicylate of soda was mixed with a pint and three-quarters of water. So successful was this, that on M. de Rothschild's preserves at Rambouillet, where a few days before gapes were so virulent that 1,200 pheasants were found dead every morning, it succeeded in stopping the epidemic in a few days. But to complete the matter, M. Megnin adds that it is always advisable to disinfect the soil of preserves. For this purpose, the best means of destroying any eggs or embryos it may contain, is to water the ground with a solution of sulphuric acid, in the proportion of a pennyweight to three pints of water, and also birds that die of the disease should be deeply buried in lime.

Fumigation with carbolic acid is an undoubted cure, but then it is a dangerous one, and unless very great care is taken in killing the worms, the bird is killed also. Thus many find this a risky method, and prefer some other. Lime is found to be a valuable remedy. In some districts of England, where lime kilns abound, it is a common thing to take children troubled with whooping cough there. Standing in the smoke arising from the kilns, they are compelled to breathe it. This dislodges the phlegm in the throat, and they are enabled to get rid of it. Except near lime kilns, this cannot be done to chickens, but fine-slaked lime can be used, either alone or mixed with powdered sulphur, two parts of the former to one of the latter. The air is charged with this fine powder, and the birds breathing it, cough, and thus get rid of the worms, which are stupefied by the lime, and do not retain so firm a hold on the throat. An apparatus has recently been intro-

duced to spread this lime powder. It is in the form of an air fan, with a pointed nozzle, which is put just within the coop at night, when the birds are all within. The powder is already in a compartment made for it, and by the turning of a handle, it is driven through the nozzle, and the air within the coop charged with it. There is no waste of powder, nor any fear that it will not be properly distributed. Experienced pheasant and poultry-breeders state that by the use of this once a week, gapes are effectually prevented.—Stephen Beale, in *Country Gentleman*.

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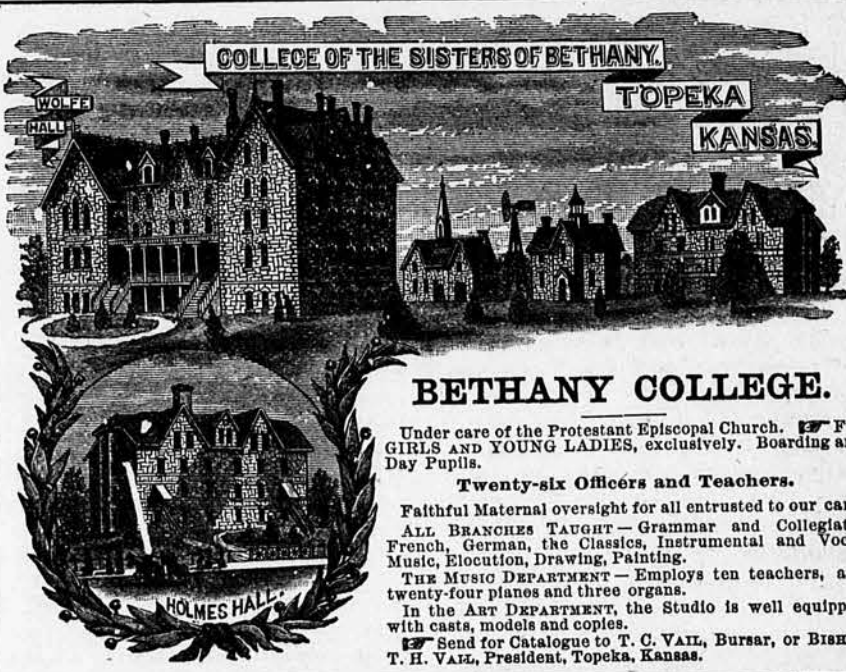
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## The Busy Bee.

### Bee Stings.

I am requested by a subscriber to *Gleanings* to explain how the bee sting is removed from one's skin when broken off in the act of stinging. He suggests that, if it does not work out, it must be absorbed by the system; in which case he thinks that some bee-keepers must be composed largely of stings.

The skin consists of two layers—the outer scarf skin, or cuticle, also called epidermis, and the inner true skin, or corium, also called *cutis vera*. The outer skin is made up of what is known as scaly, or pavement epithelium; that is, it consists of innumerable minute overlapping scales. The inner scales contain pigment in their substance, and thus the color of skin. The albino has no pigment, and hence his skin is transparent, and looks pinkish, as we look like through and see minute blood-vessels filled with blood. The inner skin consists of an outer part, which, like the cuticle, has no nerves, and so is not sensitive to pain or touch. This is made up of white fibrous tissue and small involuntary muscles. These muscles contract if the skin is chilled, and drawing the skin away from about the hairs forms the well-known "goose flesh." Beneath this layer, which is known as the reticulum, because of its intercrossing fibers, is the papillary layer. This is the very inner part of the skin. It takes its name from the fact that little teat-like processes—papillae—push up against the outer part of the skin. The ridges seen on the inside of our hands are but the elevations of these papillae. Into these papillae from beneath come nerves and blood-vessels. Thus from here comes all nourishment to the outer skin; and here is the sensitive part of the skin. Thus, a bee to hurt us must push its sting through the cuticle and reticulated part of the corium till it pierces the papillae, where the blood receives the poison and the nerves twinge with its venom.

Now, as we understood the anatomy of the skin we can see how the sting, if broken off in the skin, is loosened and liberated. The scaly, or outer skin, is constantly being worn off. When we bathe, the water is often clouded with these minute scales. The snake sheds its scales once a year; but we are doing it all the time. As these scales are constantly wearing off, any minute portion of sting which is held in them is also worn off and separated from the body. Even if a small portion of a sting is caught by the reticulum, the part would probably suppurate and loosen the sting, as is done with slivers that enter and are caught and held in the skin. We thus see that a bee-keeper is not made up of stings, by any means.

In case of porcupine quills, which are barbed like a bee's sting, they are thrust through into the muscle, so that every move of the muscle pushes them; and as they cannot go back, they are pushed on. Thus a porcupine quill may pass some distance through the unlucky animal which has caught them in its tissues.—A. J. Cook, *Agricultural College, Mich., in Gleanings*.

A medicine prepared for the general public should contain nothing hurtful in any dose. Such a medicine is Shallenberger's Antidote for Malaria; it destroys Malaria as water puts out fire, and is just as harmless. Sold by Druggists.

The standard of scholarship at Washburn College, Topeka, Kansas, is equal to that of the best colleges at the East. It employs fourteen instructors, and has one of the finest libraries in the West. The fall term begins September 12.

\$110 will pay for board, room and tuition for forty weeks at Campbell Normal University. Board in the family of the President.

### She Broke the Engagement

Because she saw that he had ceased to love her. Her beauty had faded, her former high spirits had given place to a dull lassitude. What had caused this change? Functional derangement; she was suffering from those ailments peculiar to her sex. And so their two young lives drifted apart. How needless, how cruel! Had she taken Dr. Pierce's Favorite Prescription she might have been restored to health and happiness. If any lady reader of these lines is similarly afflicted, let her lose no time in procuring the "Favorite Prescription." It will give her a new lease of life. Sold by druggists, under a positive guarantee from the manufacturers, of perfect satisfaction in every case, or money refunded. See guarantee on bottle wrapper.

Young veal may be told by the bone in the outlet. If it is very small the veal is not good.

The preparatory department of Campbell Normal University is the most thorough in the West.

For home use the white onions are preferred, as they are mild in flavor. For market use the red and yellow kinds are the most desirable.

### For Sale or Trade.

960 acres of nearly all bottom land, running water, young growing timber, near railroad station. Will take part payment in cattle. CARL WEIDLING, Topeka, Kas.

### For Sale.

For the benefit of the parties who circulate the story that I am out of the Hereford business, I now offer registered bulls at \$50 to \$100. E. S. SHOCKEY, Topeka, Kas.

The Orange County Farmer says the Gregg is a good raspberry to sell, but a mighty poor one to eat. It is large and handsome, but deficient in flavor and lacking in sprightliness.

At the Southwestern Business College, Wichita, Kas., living expenses have been greatly reduced by the erection of boarding halls and dormitories where students get good board at \$1.90 per week and room rent free. Write for catalogue.

The well-known publisher, L. W. DICKERSON, of St. Louis, Mo., has recently issued a campaign book, entitled "THE NATIONAL CONTEST." It gives valuable information on the Tariff question, Statistics, etc., valuable for every voter. Also complete biographies of Cleveland and Thurman and Harrison and Morton. Agents wanted to sell this book.

CARBONDALE, KAS., April 22, 1888.

Mr. C. A. Booth, Topeka, Kas.:

DEAR SIR:—The Advance Stock Hydrant you have put in for me eighteen months ago, is doing the work to a charm, as in the beginning; it never froze the least for the last two winters, and I would not do without it for three times the amount it cost me.

Yours very truly, JOHN J. DEITRICH.

### 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.

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## SPECIFICS.

Sold by Druggists, or sent postpaid on receipt of price.—HUMPHREYS' MEDICINE CO. 109 Fulton St. N. Y.

### Consumption Surely Cured.

TO THE EDITOR:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. Address. Respectfully, T. A. Slocum, M. C. 181 Pearl St., New York.

### Consumption Cured.

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

## Tutt's Pills

will save the dyspeptic from many days of misery, and enable him to eat whatever he wishes. They prevent

**Sick Headache,**  
cause the food to assimilate and nourish the body, give keen appetite, and

**Develop Flesh**  
and solid muscle. Elegantly sugar coated. Price, 25cts. per box.  
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The Prettiest Young City of the Smoky Valley.

Beautiful Springs, Lake, and also, what the name implies,

RIVER VIEW.

Buy a home in or farm adjoining Riverview. Call on or address

THOS. E. FULGHUM,  
Hays City, Kansas.

## TANSY PILLS!

Safe and Sure. Send 4c. for "WOMAN'S SAFE GUARD." Wilcox Specific Co., Phila., Pa.

**GOLD.** Live at home and make more money working for us than at anything else in the world. Either sex. Costly outfit FREE. Terms FREE. Address, TRUE & Co., Augusta, Maine.

\$75.00 to \$250.00 A MONTH can be made working for us. Agents preferred who can furnish a horse and give their whole time to the business. Spare moments may be profitably employed also. A few vacancies in towns and cities. B. F. JOHNSON & CO., 1009 Main St., Richmond, Va.

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48 to 54 Dearborn St. Eighteenth year. Employs twenty teachers; admits both sexes; gives thorough instruction. Fall term opens September 8. Business and Short-hand College, School of Drawing, Elocution, Mathematics, Languages, Literature, Music.  
Address: SUPERINTENDENT.

**COMMERCIAL COLLEGE OF KY. UNIVERSITY,**  
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Book-keeping, Business, Short-hand, Type-Writing & Telegraphy taught. 1000 Students past year. 15 Teachers. 10,000 Graduates in Business. Open Now.  
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## Fall Term

—OF—

## Topeka Business College

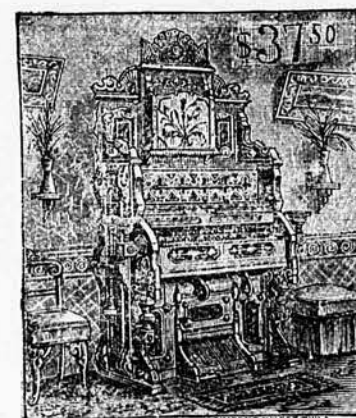
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The following branches are taught: Bookkeeping, Shorthand, Business Practice, Arithmetic, Writing, Political Economy, Civil Government, Commercial Law, Letter Writing, Spelling, Rapid Calculations and Typewriting on the New Model Crandall, Hammond or Remington machines.

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## THE MARKETS.

By Telegraph, August 6, 1888.

## LIVE STOCK MARKETS.

## Chicago.

The Drovers' Journal reports:

**CATTLE**—Receipts 9,000, shipments 1,500. Market steady and strong. Steers, \$3 60a 00; stockers and feeders, \$2 00a 3 40; cows, bulls and mixed, \$1 50a 3 40; Texas cattle, \$2 50a 3 70; Western rangers, \$3 35a 4 95.

**HOGS**—Receipts 13,000, shipments 7,000. Market stronger. Mixed, \$5 85a 6 50; heavy, \$6 50a 6 65; light, \$6 50a 6 60; skips, \$5 40a 6 05.

**SHEEP**—Receipts 2,000, shipments 1,000. Market stronger. Natives \$2 50a 2 75, Western shorn \$4 00a 4 20, Texas shorn \$3 25a 3 75, lambs \$4 50a 6 00.

## Kansas City.

**CATTLE**—Receipts since Saturday 4,597. The market was a trifle slow. Salesmen were after better prices and buyers were slow to spring values. Taken as a whole compared with Saturday it was steady to strong for good and weak for common cows and canners. Stockers and feeding steers were in good demand at Saturday's prices. Sales ranged \$3 10 a 4 10 for steers.

**HOGS**—Receipts since Saturday 1,663. Extreme range of sales \$5 85a 6 30, bulk at \$6 20a 6 25.

**SHEEP**—Receipts since Saturday 2,394. Market steady. Sales at \$2 90a 3 30.

## PRODUCE MARKETS.

## New York.

**WHEAT**—No. 2 red, 96a 96½c elevator, 97½a 98½c delivered.

**CORN**—No. 2, 57½c delivered.

## St. Louis.

**FLOUR**—Quiet and steady.

**WHEAT**—No. 2 red, cash, 84½c.

**CORN**—No. 2 cash, 44½a 44½c.

**OATS**—No. 2 cash, 24c.

**RYE**—Quiet; 45c bid.

**BARLEY**—Nothing done.

## Chicago.

Cash quotations were as follows:

**FLOUR**—Steady and unchanged.

**WHEAT**—No. 2 spring, 83½c; No. 3 spring, 75½a 78½c; No. 2 red, 87c.

**CORN**—No. 2, 49½c.

**OATS**—No. 2, 25a 28½c.

**RYE**—No. 2, 47½c.

**BARLEY**—No. 2, firmer.

**FLAXSEED**—No. 1, \$1 10.

**TIMOTHY**—Prime, \$2 40.

**PORK**—\$14 30a 14 40.

**LARD**—\$8 87½.

## Kansas City.

**WHEAT**—Receipts at regular elevators since last report 12,611 bushels; withdrawals, 11,559 bushels, leaving stock in store as reported to the Board of Trade to-day, 95,422 bushels. The market on 'change to-day was about steady. On the call the only sales were No. 2 red, August, at 71c against 70½c bid Saturday when 71½c was asked, and No. 2 soft, cash, at 73c—¼c lower than Saturday's asking price when there were no bids. No. 3 red, August, sold at 64½c.

**CORN**—Receipts at regular elevators since last report, 5,895 bushels; withdrawals, 4,864 bushels, leaving stock in store as reported to the Board of Trade to-day, 79,692 bushels. No. 2 cash, 35½c bid, 36½c asked.

**OATS**—No. 2 cash, no bids nor offerings.

**RYE**—No. 2 cash, no bids nor offerings.

**HAY**—Receipts 30 cars. Market steady. New, \$5 50a 6 00.

**SEEDS**—We quote: Flaxseed, 93a 94c per bu. on a basis of pure; castor beans, \$1 00 for prime.

**OIL-CAKE**—Per 100 lbs. sacked, f. o. b., \$1 25; \$1 00 per 1,000 lbs.; \$2 00 per ton; car lots, \$1 90 per ton.

**FLOUR**—Quiet. There is good inquiry for new top grades, but transactions limited. Buyers and sellers are not yet able to agree on prices and unsettled freight rates cause a stagnancy in the market. Low grades are almost unsalable. Quotations are for unestablished brands of old in car lots, per ½ bbl. in sacks, as follows: XX, 90c; XXX, \$1 00a 1 05; family, \$1 05a 1 10; choice, \$1 35a 1 40; fancy, \$1 45a 1 55; extra fancy, \$1 60a 1 65; patent, \$1 90a 2 00.

**BUTTER**—Very weak. We quote: Creamery, fancy, 18c; good, 16c; dairy, fancy, 15c; good to choice, 12a 13c; store-packed, choice, 10c.

**CHEESE**—We quote: Full cream, twins, 10c; full cream, Young America, 11c.

**EGGS**—Receipts liberal and market weak at 10c per dozen for strictly fresh.

**POTATOES**—40c per bushel.

**APPLES**—\$1 00a 1 50 per bbl.

**BROOMCORN**—Dull and weak. We quote: Green self-working, 4c; green hurl, 4c; green inside and covers, 2½a 3c; red-tipped and common self-working, 2c; crooked, 1c.

**PROVISIONS**—Following quotations are for round lots. Job lots usually ¼c higher. Sugar-cured meats (canned or plain): Hams 13½c, breakfast bacon 11½c, dried beef 9c. Dry salt meats: clear rib sides \$8 35, long clear sides \$8 25, shoulders \$7 25, short clear sides \$8 65. Smoked meats: clear rib sides \$9 25, long clear sides \$9 15, shoulders \$8 50, short clear sides \$9 25. Barrel meats: mess pork \$14 50. Choice tierce lard, \$8 00.

## Topeka Markets.

**PRODUCE AND PROVISIONS**—Corrected weekly by W. W. Manspeaker & Co., 711 Kansas avenue. (Wholesale price).

Butter, per lb. .... \$ 10 a 12½

Eggs (fresh) per doz. .... 10

Beans, white navy, H. P., per bus 2 65

Potatoes (new) " " 50

Beets " " 25

Say Mister  
give me a  
plug of  
**JOLLY  
TAR PLUG  
TOBACCO.**  
No MONKEYING



but give me the  
genuine **JOLLY  
TAR PLUG**  
I've chewed  
it and when  
I find a good  
thing I hang  
on to it. **JOLLY  
TAR**  
CAN'T be beat.

## A Chance to Make Money!

Privileges of all kinds for sale at the office of the **BIS-MARCK FAIR.**

All persons wishing to secure rights for the Fair, September 3, 4, 5, 6, 7 and 8, 1888, had best call soon, or address **I. N. VAN HOESSEN, Sec'y, Lawrence, Kansas.**

## BLAKE'S ALMANAC

—OF—

## Weather Predictions,

From June 1, 1888, to June 1, 1889,

According to Mathematical Calculations based on Astronomical Laws, is now ready for mailing. Price **One Dollar per Copy.** Direct to C. C. BLAKE, Topeka, Kas.

This Almanac gives the predictions for each month separately, and for June, July, August and September the predictions are made for each half month. The temperature, rainfall and kind of weather are given each month for all the different sections of the United States, including the Pacific coast, Canada and Europe. Separate calculations have been made, showing what the temperature and precipitation will be in each locality, each month, which has required a vast amount of calculating. It gives many suggestions as to what crops to plant and when. Nearly every one who has had our former Almanacs has ordered this one. They are almost unanimous in saying our Almanac is the best-paying investment they have made. Address **C. C. BLAKE, Topeka, Kansas.**



## GOLDEN CROSS WHEAT

1886 G. C. savor'd 84.08 bu.  
1886 Fultz " 26 "  
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Highest yield reported this year is 56 bu. per acre. Large, hard, red grain; compact, broad head; light beard; very hardy in winter; great stooler. Sow 1½ bu. per acre. This is the coming wheat. All of next year's crop will be wanted at \$2 per bu. for seed. Yields 8 to 10 bu. more than Fultz. Price, ¼ bu., \$1; ½ bu., \$1.75; 1 bu., \$3; 2½ bu. bag, \$6—or by mail, postpaid, 1 lb., 40c.; 3 lbs., \$1; 4 lbs., \$1.25. Send for valuable wheat catalogue free. Eight best varieties. **J. A. EVERITT & CO., Seedsmen, Indianapolis, Ind.**

## WINTER TURNIP SEED.

Large white, 4 to 8 pounds, fine table or stock turnip. Will stand all winter in patch and guaranteed not to freeze or spoil if ground freezes five feet deep. Extra early fine spring salad. Now is the time to prepare well, rich soil, to sow July to October—earlier the better. \$1 per pound; ¼ pound, 50 cents; ½ pound, 25 cents. Postage prepaid. **LARGE QUANTITY AT REDUCED RATE.** Send F. O. Orders on Memphis, Tenn., Postal Note or Express to Knoxville, Tenn. **B. E. DALE, Knoxville, Shelby Co., Tenn.**

## HUGH E. THOMPSON, BROOMCORN

Commission and Dealer in Broom-Makers' Supplies. Reference:—National Bank of Commerce. 1412 & 1414 Liberty St., Kansas City, Mo.

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## THE NEW DOCTOR BAILEY CUTTER. For Ensilage and Dry Forage.

Six sizes, for hand, horse and steam power. Only machine made with a drawing and shearing cut. Great saving of power and increase of capacity. Made only by **AMES PLOW CO., Boston and New York.** Send for circulars and catalogue.

## ATTENTION, FARMERS!

You no doubt are aware of the fact that the dairy business is the most remunerative part of farming, and that there is no reason in the world why Kansas should not rank foremost in the creamery interests.

## Kansas Creamery Butter

to-day is selling at the highest market prices in Denver and the West, but there is not enough butter made in Kansas to supply this great Western demand. Colorado has to buy her creamery butter in Iowa and Illinois, and these States are getting all of this good money that should go to our

## Kansas Farmers.

Every town of six hundred inhabitants and upwards should have a **CREAMERY**, which they can procure at a **VERY SMALL COST.**

We are so situated that we can furnish all necessary Machinery and Apparatus, and give full instructions for erecting the building, which we will be glad to do at any time.

Let some enterprising farmer take hold of this, and work up a small stock company, and correspond with us.

We will be very glad to hear from anybody regarding this great industry.

**OUR CATALOGUE FOR 1888** is now out. Send 2-cent stamp for same. Respectfully,

## Creamery Package Mf'g. Co. KANSAS CITY, MO.

## HAGEY &amp; WILHELM, WOOL COMMISSION MERCHANTS ST. LOUIS, MO.

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

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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.



## The Veterinarian.

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

**MALIGNANT ANTHRAX.**—I have lost several head of cattle, lately apparently from the same cause, and write to ask you what is the trouble and what to do. The cattle are running on the very best blue grass pasture with plenty of good water and seem to be doing well, are getting fat, yet we lost three in one week. The first, a heifer, we found dead and could not imagine the cause. The second came up sick at milking time; her bag was empty, horns and ears cold, and she seemed a little lame. We gave her a dose of Epsom salts and ginger, but it did not operate by morning, so we repeated the dose. She seemed worse and now had soft swellings on her breast that seemed to grit under the skin when rubbed with the hand. We thought it black-leg, and sent at once for a local veterinarian. He treated the cow for indigestion of the fourth stomach. That night she died and we found the "manifolds" tightly packed. Very soon after, we found another heifer with these same swellings on breast and shoulder, so we suppose she died of the same disease. Now can you, or any of your subscribers tell me what was the matter and what should have been done? We are inclined to think it was black-leg. If so, what should have been done? Is there any preventive? Will be most thankful to receive any information on this subject. [There is not the shadow of a doubt in my mind about the disease. You diagnosed rightly. Your veterinarian has a new feature with regard to indigestion. This disease is called by many names. In your case, too rich, moist pasturage is likely to be the sole cause. The remedy is instant change to a higher, dryer, and less rich pasture. You ask what should have been done; removal as recommended at first, then as medication, depletion by blood-letting; physicking is too slow for the plethora. Rub with saturated camphorated spirits, six parts, common turpentine, two parts, or acidulated carbolic lotion, salt and sulphur, equal parts. Internally, give forty-grain dose of quinine or one-drachm dose of fluid extract of nux vomica in 4 oz. of water, or nitro-muriatic acid (Professor James Law) sixty drops in a little water. Hypsulphite (not sulphate) of soda, half-ounce doses three or four times a day. Anthrax always needs the best and prompt skill of a scientific veterinarian.]

**BLACK-LEG.**—Please tell me through your paper what is the matter with my spring calves and if anything can be don't for them. Three of them have died. They get lame, some in the front leg and some in the hind leg—so lame they cannot walk. They live from twelve to twenty hours after they take sick. Their legs swell and seem stiff. I skinned the first one that died. It was lame in the right hind leg, and under the skin on that leg, was all black and blood-shot. What is the matter with them and can anything be done for them? [Your calves died of black-leg. If you have any more of the same age, insert a seton deeply in the brisket, and smear it daily with turpentine ointment. Move the seton twice daily and leave it in this situation for two weeks.]

**ANKLE SPRAINED.**—A mare's near hind ankle was strained last spring while running in a yard, and she was dead lame for a week or so, and more or less lame for a month. Ankle was badly swollen, but not bruised; lately it has swollen again, but is not favored. Mare is kind, but kicks in stall. [Put a

## CHICAGO.

## KANSAS CITY.

# THE JAMES H. CAMPBELL CO.

## Live Stock Commission Merchants,

### FOR THE SALE OF CATTLE, HOGS AND SHEEP.

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KANSAS CITY STOCK YARDS.

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

strap around leg above hock; have a chain on strap about a foot long with a wooden block on end. Keep this on nights. Give mare two tablespoonfuls of the following powder in feed three times a day: Powdered nitrate of potass. 6 oz.; powdered colchicum root, 4 oz.; mix. Give a ball as follows: Powdered Barbadoes aloes, 6 dr.; powdered gentian, 2 dr., and a sufficient quantity of syrup; mix.]

Send for a catalogue of Campbell Normal University, Holton, Kas.



## LEWIS' 98% LYE

(PATENTED)  
The strongest and purest Lye made. Will make 10 lbs. of the best Perfumed Hard Soap in 20 minutes without boiling. It is the best for disinfecting sinks, closets, drains, etc. Photographers' and machinists' uses. Foundrymen, bolt and nut makers. For engineers as a boiler cleaner and anti-incrustator. For brewers and bottlers, for washing barrels, bottles, etc. For painters to remove old paints. For washing trees, etc. etc. PENNA. SALT MFG. CO., Gen. Agts., Phila. Pa.

## Maple Grove Duroc-Jerseys.

We use only the choicest animals of the most approved pedigree, hence our herd is bred to a very high state of perfection. Pigs in pairs not akin. Stock of all ages and sows bred for sale at all seasons. Prices reasonable and quality of stock second to none.

J. M. BROWNING, Perry, Pike Co., Ill.

## F. M. LAIL, MARSHALL, Mo.,

Breeder of the very best



## POLAND-CHINA HOGS.

Pigs from ten first-class boars for the season's trade.

## LANEY & PFAFF,

GREEN RIDGE, MISSOURI.

THOROUGHbred

## POLAND-CHINA HOGS

FOR SALE.

No poor pigs sent out. [Mention KANSAS FARMER.]

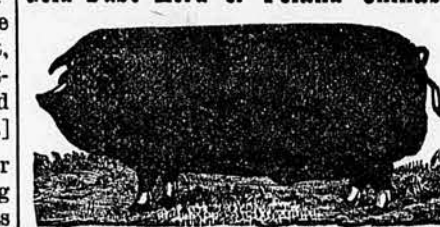
## OTTAWA HERD



OF POLAND-CHINA and DUROC-JERSEY Hogs. Twenty head of first-class boars from four to nine months old. Also seventy-five head of sows of same age, sired by Bruce 4095, C. R., Leek's Gilt Edge 2837, C. R., Whipple's Stemwinder 4701, Daisy's Corwin 4697, Dams—Mazy 2d 6214, Zeida 3d 5250, Maggie's Perfection 8210, Vone's Perfection 9424, Fay's Gold Drop 11676, Jay's Dimple 12172, Eureka Mayo 12176, and many other equally as well bred, and fine as can be produced by any one. Part of sows bred to gilt-edge boars of the most popular strains. Will sell at prices to suit the times. Never had any cholera in the herd. Write for prices.

I. L. WHIPPLE, Box 270, Ottawa, Kas.

## Gold Dust Herd of Poland-Chinas.



J. M. McKEE, WELLINGTON, KANSAS.

Tom Corwin 3d 5293 A. P. C. R. at head of herd. Strains representing Model, Give or Take, Gold Dust, Black Bess and Black Beauty. Have some choice male pigs for sale. Also eggs of P. Rock, Brown Leghorn and Light Brahmas, \$1.25 per 13; Toulouse Geese, 15c.; Pekin Duck 10c. each. Write; no catalogue.

## KANSAS CITY.

## THE GOLDEN BELT HERD OF Thoroughbred Poland-Chinas

This herd comprises the richest blood to be found in the United States, and in uniformity and style has no superior in this country. Choice animals of all ages and either sex for sale. 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.

## Poland-Chinas

## 100 PIGS FOR SALE!

NEW BOARS:—Young America 3811, C. R., noted show hog and breeder; nine sweepstakes; sire of sweepstakes hog at Chicago fat stock show. Lord Corwin 4th, 1851; daisy show hog, of the highest premium blood. Lampe's Tom Corwin 6207; gilt-edge premium pedigree. SOWS:—Black Rosas, Gold Dust, Double Corwins, Black Bess, Black Beautys, Buckeyes, Dimples, Stemwinders, etc. Royal blood, gilt-edge pedigrees. Shipped to fifteen States and thirty-three counties in Kansas.

W. S. HANNA, OTTAWA, KANSAS.

## MAINS' HERD OF POLAND-CHINAS.



Jas. Mains, Oskaloosa, (Jefferson Co.), Kas., is located two and a half miles southeast of Oskaloosa, on Maple Hill Stock Farm. All hogs eligible to Ohio Poland-China Record. A fine lot of spring pigs now ready, for sale at prices that will suit the times. Also some fall sows now ready to breed or will be bred if desired. Personal inspection solicited.

For Berkshire Swine and Southdown Sheep that are first-class, or money refunded, call on or address J. M. & F. A. SCOTT, Box 11, Huntsville, Mo. [Mention KANSAS FARMER.]

## ORDERS TAKEN NOW

For SPRING PIGS sired by



ROYAL GRANITE 10105,

The best BERKSHIRE boar ever owned at "HAW HILL," and several other first-class sires. Enclose stamp for catalogue and prices. SPRINGER BROS., Springfield, Ill.

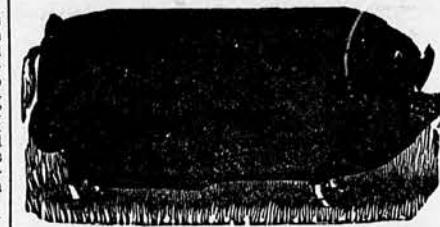
## Sunflower Stock Farm.



We are breeding Poland-Chinas, the Improved Chester Whites, Berkshires, Small Yorkshires and Duroc-Jersey Swine, and have secured more premiums than any other breeder in the State—last season getting 120 first and sweepstakes and 15 second. We breed from the very best strains, hence our remarkable satisfaction. Of Poultry we breed ten leading varieties, the best to be found in the West; also Toulouse Geese, Bronze and White Holland Turkeys. Eggs in season. Hogs all eligible to record. Reasonable prices. Write your wants. Address H. G. FARMER & SONS, Garnett, Kas.

## ST. LOUIS.

## 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 prizewinner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for pigs of either sex not akin, or for matured animals. Prices reasonable. Satisfaction guaranteed. Send for catalogue and price list, free. S. McCULLOUGH, Ottawa, Kansas.

## ENGLISH BERKSHIRES.



THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE 4880, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chikens. Your patronage solicited. Write. [Mention this paper.] M. B. KEAGY, Wellington, Kas.

## LOCUST & GROVE & HERD



## LARGE ENGLISH BERKSHIRE SWINE.

Nothing sent out but what is a credit to Locust Grove Herd. Individual excellence combined with purity of breeding, is my motto. Prices to suit the quality of stock offered. Correspondence and inspection solicited. Orders booked now for spring pigs. Address as below, or better, come and see.

JAMES HOUK, Prop'r, Hartwell, Henry Co., Missouri.

## SELECT HERD OF LARGE BERKSHIRES!

G. W. BERRY,

BERRYTON, Shawnee Co., KANSAS.

My sows represent the Royal Duchess, Sallie, Hillside Belle, Charmer, Stumpy, and other families. These Swanwick and Humphrey families are larger, thicker-fleshed, set on shorter legs, and possess finer qualities than other hogs. Herd headed by British Champion III. 13481 and Dauntless 17417. My aim is to produce a type of Berkshires honorable to the Select Herd and the breed. Correspondence in regard to spring pigs invited.

BERRYTON is located nine miles southeast of Topeka, on the K., N. & D. R. R. Farm adjoins station.

## HAY FEVER CATARRH

Ely's Cream Balm was recommended to me for hay fever. I have found it a specific for that dreadful disease. For ten years I have been a great sufferer. Cream Balm is the only preventive I have ever found.—F. B. Ainsworth, Publisher, Indianapolis, Ind.



A particle is applied into each nostril and is agreeable. Price 50 cents at Druggists; by mail, registered, 60 cts. ELY BROS., 55 Warren St., New York.

## DR. OWEN'S BODY BATTERY!

FOR MEN AND WOMEN. Contains 10 degrees of strength. Current can be increased, decreased, reversed or detached at will, and applied to any part of the body or limbs by whole family. Cures General, Nervous and Chronic Diseases. It is light, simple and superior to all others. Guaranteed for one year. Our Large Illustrated PAMPHLET giving prices, testimonials, mechanism, and simple application for the cure of disease will be sent FREE to any address.

DR. OWEN BELT CO., 191 State St., Chicago.



# SHERWOOD & ROHRER STOCK FARM



Home of HASSELMAN'S BROWNEY 28777.  
Tested on island of Jersey at rate of  
33 pounds 12 ounces in seven days.

## BREEDERS OF A. J. C. C. JERSEY CATTLE,

Offer a few choice-bred Bull Calves by such noted sires as the St. Lambert Duke 76 bull, ST. VAL-  
ENTINE'S DAY 15278, whose sire was a son of Stoke Pogis 3d 2238, and a grandson of Victor Hugo 197;  
dam a daughter of the great prize bull, Duke P. 76 C.; and the in-bred Coomassie bull, HAPPY GOLD  
COAST 14713.

Several of these Bulls are old enough for service, and are out of tested cows. To responsible par-  
ties, will give time or exchange for cows or heifers.

SHERWOOD & ROHRER, VALLEY CENTER, KANSAS.

## LINWOOD SHORT-HORNS

W. A. HARRIS, PROP'R, LINWOOD, LEAVENWORTH CO., KAS.

Substance, flesh, early maturity and good feeding quality the objects sought. The  
largest herd of Scotch Short-horns in the West, consisting of Cruickshank Victorias, Lavenders,  
Vilets, Secrets, Brawwith Buds, Kinellar Golden Drops, etc., headed by Imp. Baron Victor 42824,  
a prize-winner and sire of prize-winners.

LINWOOD—Is twenty-seven miles from Kansas City, on Kansas Division Union Pacific R. R. Farm  
joins station. Inspection invited. Catalogue on application.

## 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 re-  
ceived.

Terms to Suit Purchasers. Send for illus-  
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E. BENNETT & SON.



IMPORTERS AND BREEDERS OF

## ENGLISH SHIRE AND SUFFOLK PUNCH HORSES



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4713.

### RED POLLED CATTLE.

We have on hand a very  
choice collection, includ-  
ing 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 se-  
lected with great care by G. M. SEXTON, Auctioneer to the Shire Horse Society of England.  
Prices low and terms easy. Send for catalogues to



Peter Piper (117).

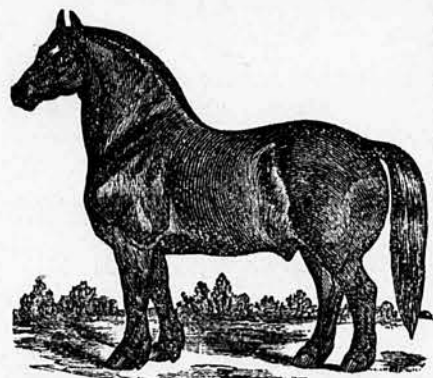
SEXTON, WARREN & OFFORD, Maple Hill, Kansas.

## COTSWOLD AND SHROPSHIRE SHEEP.

Imported and home-bred, of different ages—the farmer's general-purpose sheep. Spring  
crop of lambs, both breeds, very promising.

Also Merino Sheep for sale—To settle the estate of R. T. McCulley—L. Bennett, admin-  
istrator, who is authorized to sell at private sale, in numbers to suit purchaser.  
Short-horns—Choice young animals, of both sexes, by Renick Rose of Sharon sires.  
Bronze Turkeys and Plymouth Rock Chickens, pure breeds.  
Also Berkshire Hogs.—For prices or catalogue, address

U. P. BENNETT & SON, Lee's Summit, Mo.



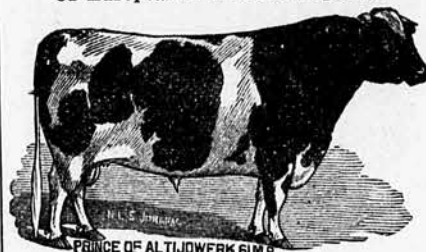
The Imported CLYDESDALE Stallion

KNIGHT OF HARRIS 995  
(2211),

The property of H. W. McAFEE, will make  
the season at Prospect Farm, three miles west  
of Topeka, Sixth street road.

## Holstein - Friesian Cattle

Of European Herd Book Registry.



The sweepstakes bull PRINCE OF ALTIJWERK (61 M. B.) at head of herd, has no superior. Cows and  
heifers in this herd with weekly butter records from  
14 pounds to 19 pounds 10 1/2 ounces; milk records, 50 to  
80 pounds daily. The sweepstakes herd. Write for  
catalogue. M. E. MOORE, Cameron, Mo.  
(Mention this paper.)

HAAFF'S NEW PRACTICAL DE-  
HORNER. Fifty illus-  
trations. New Tools. Cattle Tags. New Water-  
heater. Send for circular. Agents wanted. Mention  
this paper.  
H. H. HAAFF,  
Box 193, Chicago, Ill.

## Holstein - Friesian Cattle.

I have a choice herd of these justly-cele-  
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grades, for sale at reasonable prices. Per-  
sonal inspection invited. Call on or address  
JNO. D. PRYOR,  
Winfield, Cowley Co., Kas.

## Devon Cattle!

We are the largest breeders of this hardy,  
easy-keeping breed, one of the best for the  
West. Stock for sale singly or car lots.

RUMSEY BROS. & CO.,  
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## SHANNON HILL STOCK FARM.



G. W. GLICK, Proprietor,  
Atchison, Kansas.

Breeds and has for sale Bates  
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## SHORT-HORNS

Including representatives of

Kirklevingtons, Filberts, Craggs, Prin-  
cesses, Gwynnes, Lady Janes, and  
other fashionable fam-  
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The Grand Bates Bulls,

8th Duke of Kirklevington No. 41798,  
Waterloo Duke of Shannon Hill No. 89879,

At head of herd.

Fifteen choice young Bulls for sale  
now.

Correspondence and inspection of herd so-  
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fair prices.

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—TAKE THE—

## St. Joseph & Grand Island R. R.

(UNION PACIFIC ROUTE)

And visit the Pleasure Resorts of Colorado,  
Utah, Washington Territory, or the Fa-  
mous Yellowstone Park.

Pullman Palace Sleepers, Modern Day  
Coaches and Free Family Sleepers, go to make  
up an equipment which is unexcelled.

NOW IS THE TIME TO GO,

As cheap Tourist Tickets are on sale at all  
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## MISSOURI PACIFIC RAILWAY.

DIRECT LINE TO

KANSAS CITY, ATCHISON, ST. JOSEPH,  
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SEDALIA, HANNIBAL, ST. LOUIS and all  
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DALLAS, FT. WORTH, AUSTIN, SAN AN-  
TONIO, HOUSTON, GALVESTON, and all  
principal CITIES in TEXAS and the SOUTH-  
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PUEBLO, DENVER and the WEST.

Solid Daily Trains with Pullman Buffet  
Sleeping Cars between Kansas City, Pueblo  
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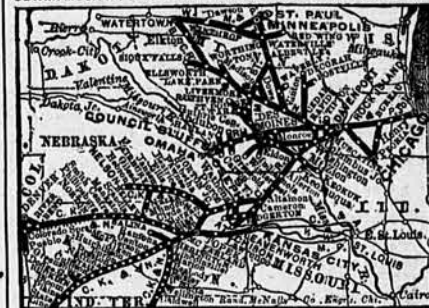
## COLORADO SHORT LINE

5 DAILY TRAINS | DAILY TRAINS 5  
KANSAS CITY TO ST. LOUIS.

H. C. TOWNSEND,  
General Passenger and Ticket Agent, ST. LOUIS, MO.

## A MAN

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



## Chicago, Kansas & Nebraska R'y

(GREAT ROCK ISLAND ROUTE.)

It affords the best facilities of communication  
between all important points in KANSAS, NE-  
BRASKA, COLORADO, NEW MEXICO, the IN-  
DIAN TERRITORY, TEXAS, and beyond. Its  
Main Lines and Branches include ST. JOSEPH,  
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The Vast Area of Fertile Country  
tributary thereto offers rare inducements to farm-  
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class. Lands cheap and farms on easy terms.  
Traverses the famous "GOLDEN BELT" whose  
varied products and herds of cattle, horses and  
swine are the admiration of the world.

### Prompt and Convenient Connections

at Kansas City and St. Joseph for Chicago, St.  
Louis and all points East, South and Southeast;  
with FAST LIMITED TRAINS OF GREAT ROCK  
ISLAND ROUTE for Davenport, Rock Island, Des  
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ROUTE for Spirit Lake, Watertown, Sioux Falls,  
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### Splendid Passenger Equipment

Strictly First Class, entirely new, with latest  
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Coaches, Restful Reclining Chair Cars and Palace  
Sleeping Cars. Solidly ballasted steel track; iron  
and stone bridges, commodious stations, and  
Union Depots at terminal points.

For Tickets, Maps, Folders, or desired infor-  
mation, apply to nearest Coupon Ticket Agent,  
or address at Topeka, Kansas,

H. A. PARKER, JNO. SEBASTIAN,  
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## Memphis Route,

KANSAS CITY, FT. SCOTT & MEMPHIS R. R.

(Formerly Gulf Route—Kansas City,  
Fort Scott & Gulf R. R.)

Offers you the most pleasant and desirable  
route to Kansas City and all points East, North  
and West; to Memphis and all points South.

At Kansas City, connections are made at  
Union Depot with all through trains for Chi-  
cago, St. Louis and the East; to St. Paul, Den-  
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and Northwest. Via this line, entire train  
with Free Reclining Chair Car and Pullman  
Buffet Sleeping Car runs through to Memphis,  
Tenn.; through coach Kansas City to Bristol  
via Chattanooga and Knoxville. There is no  
other direct route from the West to Jackson-  
ville, Pensacola, Nashville, Chattanooga, and  
all Southern cities.

This route, via Hoxie, is over one hundred  
miles the shortest line to Little Rock, Hot  
Springs, and points in Arkansas.

Write for large map and time-tables, show-  
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Before purchasing your ticket, call upon a  
ticket agent of this Company, or write to the  
undersigned for rates. Special rates and ar-  
rangements for parties and their movables,  
going South to locate.

Send for a copy of the *Missouri and Kansas  
Farmer*, giving full information relative to the  
cheap lands of Southwest Missouri. Mailed  
free.

J. E. LOCKWOOD,  
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## The Burlington System

Of nearly 6,000 miles of steel rail, well-ballasted,  
with iron and steel bridges, an equipment unexcelled  
with over 300 passenger trains daily, traversing the  
great States of Missouri, Illinois, Nebraska,  
Iowa, Kansas, Colorado, Minnesota and the  
Territories, with trains made up of Pullman Pal-  
ace Sleeping Cars, the Burlington's Celebrated Din-  
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unquestionably the Route for travelers to take going  
East, West or North.

Three Daily Fast Trains between Kansas City, St.  
Joseph, Atchison, Leavenworth and Quincy, Bur-  
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Two Daily Fast Trains between Kansas City, St. Jo-  
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The line carrying the government fast mail be-  
tween the East and far West. Any ticket agent can  
give you maps and time table of this well-known  
route, or you can address

H. C. ORR,  
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Or A. G. DAWES,  
Gen'l Passenger and Ticket Agent, St. Joseph, Mo.

Take care of your Horses and Cattle by  
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## STOCK CAKE & ANTI-WORM REMEDY.

a cathartic stimulant for HORSES, CATTLE and  
other LIVE STOCK. This Stock Cake removes worms,  
purifies the blood and water, loosens the hide, acts  
upon the kidneys, regulates the system and puts the  
animals in healthy, thriving condition. Also is a  
Preventive Against Pleuro-Pneumonia  
in Cattle. Price 15 cents per cake.

Dr. S. P. Cregar, 1464 Wabash Ave. Chicago.



## THE STRAY LIST.

### HOW TO POST A STRAY.

#### THE FINE, FINE AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1884, 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 appraisement, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice.

And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested as strays. A penalty of from \$5.00 to \$50.00 is affixed to any failure of a Justice of the Peace, a County Clerk, or the proprietors of the FARMER for a violation of this law.

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

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 26, 1888.

Johnson county—W. M. Adams, clerk.

HORSE—Taken up by W. Haverty, in Oxford tp., (P. O. Olathe), July 5, 1888, one sorrel horse, star in forehead, 12 years old; valued at \$50.

Cherokee county—J. C. Atkinson, clerk.

HORSE—Taken up by Jos. Bryan, in Spring Valley tp., one bright bay horse, 7 or 8 years old, branded on left hip T. I. R., saddle marks on back.

Bourbon county—J. R. Smith, clerk.

2 MARES—Taken up by L. L. Cox, of Osage tp., two mares—one gray mare, 14 hands high, about 6 or 7 years old, small scar on the left hind leg near the ankle; the other one is a bay, about 9 years old, 13 hands high, white spot in forehead, scar on right shoulder-blade, long hair on the legs, no other marks or brands visible; valued at \$110.

Atchison county—Chas. H. Krebs, clerk.

MULE—Taken up by Willie Smith, in Lancaster tp., (P. O. Huron), June 13, 1888, one dark bay mare mule, about 16 hands high, small knot on right jaw, shod on three feet, about 12 years old; valued at \$25.

Brown county—N. E. Chapman, clerk.

STEER—Taken up by M. B. Dickinson, in Washington tp., one red steer, 1 year old, no marks or brands; valued at \$10.

STEER—By same, one red and white steer, 1 year old, no marks; valued at \$10.

STEER—Taken up by A. Kesler, in Walnut tp., one blue and white steer, 1 year old, branded S on right hip; valued at \$20.

Miami county—H. A. Floyd, clerk.

STEER—Taken up by G. L. Knoche, in Middle Creek tp., one 2½ year old, one red and white spotted steer, 1 year old past, no marks or brands visible; valued at \$12.

#### FOR WEEK ENDING AUGUST 2, 1888.

Wyandotte county—Frank Mapes, clerk.

4 YEARLING CALVES—Taken up by T. W. Engleish, in Quindaro tp., June 1, 1888, four yearling calves, two heifers and two steers, no marks or brands; four animals valued at \$25.

Johnson county—W. M. Adams, clerk.

MULE—Taken up by A. J. Reynolds, in Shawnee tp., one bay horse mule, 15½ hands high, 7 or 8 years old, small scar on each side of neck, leg badly marked by barbed wire, right stifle very sore, small rope around neck; valued at \$35.

Linn county—Thos. D. Cottle, clerk.

FILLY—Taken up by J. M. Moore, in Potosi tp., June 18, 1888, one sorrel filly, 2 years old; valued at \$5.

Butler county—T. O. Castle, clerk.

MARE—Taken up by B. F. Smith, in Lincoln tp., June 25, 1888, one bay mare, about 8 years old, star in forehead, right hind foot white, away-backed, no brands; valued at \$35.

Hodgeman county—E. E. Lawrence, clerk.

PONY—Taken up by Theodore Baker, in Marana tp.,

(P. O. Hodgeman), June 20, 1888, one dun pony, black feet, mane and tail, about four feet ten inches high.

Franklin county—T. F. Ankeny, clerk.

STEER—Taken up by Nathan Binns, in Williamsburg tp., (P. O. Williamsburg), one 3-year-old steer, white with red spots around the neck, good size, no brand or marks; valued at \$30.

#### FOR WEEK ENDING AUGUST 9, 1888.

Cowley county—S. J. Smock, clerk.

HORSE—Taken up by Peter Paugh, in Silverdale tp., July 8, 1888, one roan horse, branded D on left shoulder; valued at \$20.

MARE—By same, one white mare, branded D on left shoulder; valued at \$10.

Jefferson county—E. L. Worswick, clerk.

MULE—Taken up by Allen Baggett, in Kentucky tp., (P. O. Madina), June 27, 1888, one dark brown mule, 20 years old; valued at \$15.

Johnson county—W. M. Adams, clerk.

MULE—Taken up by G. L. Smeaz, in Olathe tp., (P. O. Olathe), July 18, 1888, one horse mule, about 14 hands high, brown, 5 years old, clean-limbed, collar marks; valued at \$40.

Allen county—R. W. Duffy, clerk.

FILLY—Taken up by Samuel B. Dodge, in Osage tp., July 9, 1888, one bay filly, 3 years old, blaze face, left hind foot white; valued at \$35.

FILLY—By same, one bay filly, 3 years old, some white in forehead; valued at \$30.

Wilson county—D. N. Willits, clerk.

MARE—Taken up by J. C. Lindsay, in Chetopa tp., July 16, 1888, one dark brown mare, about 15 hands high, left front foot is brown and the other three are white, small white streak in forehead; valued at \$30.

#### Too Late to Classify.

FOR SALE—A five-acre lot adjoining city limits, near the Agricultural College, mostly set in fruit. House, barn, well and cistern. A nice place for one who wants to send their children to a free college. Easy terms. E. Huse, Manhattan, Kas.

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200,000 TWO AND THREE-YEAR APPLE TREES, Hedge Plants and Apple Seedlings, at low prices. BABCOCK & STONE, North Topeka, Kas.

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A full line of all kinds of Nursery Stock for fall trade. Apple, Pear, Cherry, Plum, Peach, Russian Apricot, Small Fruits, Shrubs, etc. Fine stock Grape Vines. Hedge in quantity. Extra low prices on Apple Trees by the carload, and everything else at reasonable rates. Send for Catalogue—Free. Been in the business since 1869 in the county. WM. PLASKET & SONS.

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MESSRS. DIXON & SON, PROPRIETORS.—Have for sale 40,000 Raspberry and 150,000 Strawberry Plants of tested varieties. Raspberries—Ohio, Souhegan, Gregg and Nemaha, \$1.25 to \$2.50 per 100, or \$10 to \$15 per 1,000. Strawberries—Crescent, Minor, May King, Bubach, Summit and Windsor, 75 cents to \$2.50 per 100, or \$25 to \$15 per 1,000. Send orders early, and always mention KANSAS FARMER.

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MILLIONS

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TEN MILLION FOREST TREE SEEDLINGS.

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

FIVE THOUSAND IRISH JUNIPERS—Two-

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

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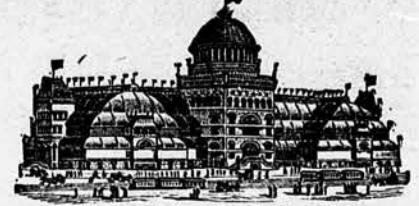
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Music by Signor Liberati's grand military band from New York.

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—TO BE HELD AT—  
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**\$25,000 IN PREMIUMS.**

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GREATEST  
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1888!

REPRESENTING  
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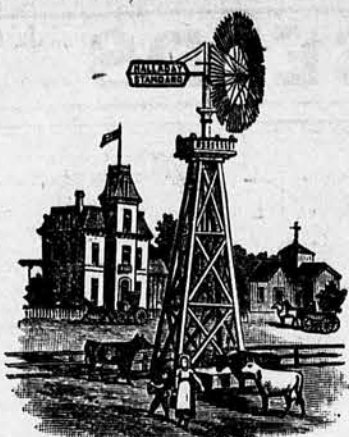
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 With the TRIUMPH STEAM  
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 For the next 60 days  
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## THE DAIN AUTOMATIC Hay Stacker and Gatherers

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It is simple and well made.  
 It will outlast any three stackers of other makes.  
 Only Stacker operated and moved from place to place on an ordi-  
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 No weights, springs, complicated levers or rollers to get out of  
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 The only Stacker that will throw the hay ALWAYS on the stack  
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 The DAIN is the only Stacker that will answer for loading upon  
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## BREEDERS' DIRECTORY.

(Continued from page 1.)

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**WE SELL**.—Only warranted goods. Any society badge, 25 cents; charm, 37 cents; collar-button, 28 cents. Standard gold plate. Charles H. Williams & Co., Manufacturing Jewelers, Attleboro, Mass.

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**BARTHOLOMEW & CO.**, Real Estate and Loan Brokers, 159 Kansas avenue, Topeka, Kas. Write them for information about Topeka, the capital of the State, or lands, farms or city property.

**WANTED**.—All farmer boys who are thinking of attending some good business college this fall or winter, to write to Pond's Business College, Topeka, Kas., for circulars. Fall term begins September 8.

**HAY LAND TO LET**.—Nine miles southeast of Alta Vista. Two-thirds will be given for harvesting. Address S. S. Cartwright, Topeka, Kas.

**FOR SALE**.—Great bargains in Boynton's addition to Topeka. Parties are doubling their money buying lots in this addition. The cotton factory is going up fast. Call on D. S. Boynton, 626 Kansas avenue, room 5.

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

**FOR SALE**.—A five-room house at slaughter prices, for half what it is worth. If you wish to make money, call on D. J. Boynton, 626 Kansas avenue, room 5.

**STRAYED**.—On March 31, 1888, from Pinkerton place, south of Elevator school house, one bay three-year-old filly, a scar on left hind leg, and had halter on. Also a one-year-old brown horse colt. A liberal reward for their recovery. S. W. McKnight, Topeka, Kas.

**100,000 THIRD-CLASS HEDGE PLANTS** for sale. Nice, healthy plants. Fifty cents per 1,000. 10,000 Catalpa, 12 to 24 inches, \$2.25 per 1,000. Boxed from Douglas County Nurseries, Box 33, Lawrence, Kas.

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MILLET A SPECIALTY.  
Red, White, Alfalfa & Alsike Clovers,  
Timothy, Blue Grass, Orchard Grass, Red Top,  
Onion Sets, Tree Seeds, Cane Seed, Etc.

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**FOR TRADE FOR STOCK**.—Two good Improved Creek Bottom Farms, with timber and water. Address A. M. Mason, Neodesha, Wilson Co., Kas.

**CHOICE LOTS**.—In Boynton's addition to Topeka to exchange for a farm. West Side circle railway runs through the addition. Convenient to cotton factory, sugar mill and creamery. D. J. Boynton, 626 Kansas avenue, room 5, Topeka.

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WILLAMETTE VALLEY, 50x150 miles. U. S. Census reports show Oregon to be the healthiest State in the Union. Grass always green; no cold winters; no hot summers; no cyclones; no thunder storms; no fall-ure of crops; cheap living; magnificent scenery; rich prairie and timber land cheap. A ten-acre fruit farm at Salem will yield more income than a one-half section grain farm anywhere in the U. S. Send stamp for pamphlet to BOARD OF TRADE, Salem, Oregon.

## SECOND PUBLIC SALE

## Choice Short-horn Cattle!

Thursday, August 23, '88,

AT ALTAHAM FARM,

PLEASANT HILL, MO.



THIRTY-FIVE miles southeast of Kansas City, on the main line of the Missouri Pacific railroad. At the time and place above mentioned, I will make my second public sale of Short-horns, consisting of 30 Cows and Heifers and 10 Bulls, of well-bred Short-horns. Several first-class show animals in this selection and all good, useful animals, such as need no labels to show to what breed they belong. The following families are represented, to-wit: Rose of Sharon, Crags, Phyllis, Rosamond, Floris, Young Marys, Mandanes, Charming Roses, Adelais, Lanthas and Don Marias.

TERMS—Cash, but those desiring credit can have the time which best suits them, from four to twelve months, on acceptable bankable paper at 10 per cent. per annum.

Trains run to suit persons wishing to attend from any direction. From the north and west easy connections can be made through Kansas City, and from the southwest through Fort Scott. For Catalogues and full particulars, address

W. H. H. CUNDIFF, Pleasant Hill, Cass Co., Mo.

COL. L. P. MUIR, Auctioneer.

At 10 o'clock a. m.

A. H. LACKEY & SON and C. F. STONE will sell at that time Fifty Head of well-bred Short-horns, Cows, Heifers and Bulls, and Fifteen Head of Thoroughbred Holsteins, all descended from the celebrated Holstein herd of Thos. B. Wales, of Iowa City, Iowa, consisting of Cows, Heifers and Bulls. The Short-horns include Cruickshanks, Young Marys, Rose of Sharon, Louisas, Maidens, Beauties, Lavinias, Princesses, Arabellas, Lady Janes, and other good and useful families. The young animals offered are all the get of our renowned Cruickshank Bull, BARMPTON'S PRIDE 49854. Come and see good cattle and buy some cheap. The Holsteins are of the best milking strains of that famous breed; are all recorded and in perfect health.

TERMS:—Twelve months time will be given on good bankable notes, well secured, at 10 per cent. interest.

PEABODY—Is located at the junction of the Great Rock Island and the Santa Fe railroad, two of the greatest systems in the United States.

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