

KANSAS FARMER

ESTABLISHED, 1863.
VOL. XXIII, No. 29.

TOPEKA, KANSAS, JULY 22, 1885.

{SIXTEEN PAGES WEEKLY.
PRICE, \$1.50 A YEAR.

Kansas Crops June 30, 1885.

Compiled from reports of the legal and volunteer correspondents of the State Board of Agriculture under the direction of Major Sims, Secretary.

WINTER WHEAT.

In Kansas, as in other parts of the country, as stated by the Department of Agriculture at Washington in its last published report, "winter wheat has had an almost unprecedented experience. Calamity has attended its growth from germination to full development." In the western and central portions of the State, including the greater part of the territory known as the "wheat belt," sowing was delayed, on account of insufficient moisture, much beyond the usual time of seeding. Result: late germination, slow growth, and feeble plants at the beginning of winter. The winter was severe, with but little snow, and the alternate freezing and thawing in February and March did great damage to the crop; to which add the injury done by the Hessian fly and other pests, and we find a condition which indicates a less product than has been harvested in any one year since 1877.

Official returns received from twenty-four counties, since the date of our last report, show an increase in the acreage of winter wheat, over the estimates of correspondents, upon which our calculation for April and May were based, of an amount sufficient to increase the area for the State to 1,755,728 acres. Of this amount, correspondents report that 47.42 per cent., or 832,500 acres, will not be harvested, and a careful compilation of the estimates of correspondents, by counties, show the average yield per acre for the area remaining to be harvested to be 11.085 bushels, which indicates a product of this cereal in the State this year of 10,233,335 bushels, or 21.92 per cent. of the harvest of 1884, and short of the average annual product for five years, 20,217,759 bushels.

SPRING WHEAT.

Estimated area, 83,000 acres; a decrease from the crop of 1884, of 2,000 acres. Condition not so good as shown in the report of this board for May. Probable product, 1,250,000.

CORN.

Reports show an area of about 4,922,000 acres; and increase of 20,000 over last month's report, and 377,000 over the crop planted in 1884. The reports also show a condition of 82 per cent., as compared with the condition June 30, 1884. Probable product, 169,171,000 bushels, or 21,700,000 short of last year's crop.

OATS.

Reported area in excess of last year, 72,000 acres. Condition, as compared with June 30, 1884, 87 per cent. Estimated product, 29,082,000 bushels; an increase over the product of last harvest, of 441,000 bushels.

RYE.

Reported as 56,400 acres short of last year's year's crop. Condition, 81. Probable product, 5,061,000 bushels. Shortage, as compared with the crop of 1884, 1,174,600 bushels.

OTHER CROPS.

The returns of assessors, as to the acreage of other crops, have not as yet been compiled.

Condition, as reported by correspondents, of broom corn, 85 per cent.; flax, 93 per cent.; sorghum, 89 per cent.; potatoes, 25 per cent.; and pastures and meadows 104

per cent., as compared with condition June 30, 1884.

FRUIT PROSPECT.

Eighteen counties report the prospect for apples good, fifteen fair, and fourteen poor. General complaint of apples dropping from the trees. Reports indicate a full crop of small fruit, with a fair crop of peaches in the south central portion of the State.

Stables in Summer.

If a man could change places a few days with his beast, and could remember just how he felt when he was a horse, or an ox, it would help him very much in appreciating the comforts and advantages of good stabling at all times in the year. Some men have got far enough along to fix up a little for winter, but still act as if there is no need of stables in summer. Of course old farmers are not of that kind, but it is of those who are that we write. It is for them that we quote a suggestion from the *Tribune* and *FARMER*. It is especially applicable this warm weather. It says that many stables upon farms and in villages are built of brick, or clapboarded if made of wood, without windows, and through the sultry nights of summer, horses, and often cows, are confined here, breathing the air contaminated by the ammonia which arises from their own filth, and the effect of this is loss of appetite, disease of the lungs and a decline of strength.

One-half the injury will not arise from keeping a horse in a cold stable during winter, that will come from close confinement in summer, for animals were given a robe to shield them from cold; but no shield is given to avert the serious effects of inhaling for hours at a time a poisoned atmosphere.

Some means should be devised to give a free circulation of air through the stable, if it has to be done by leaving the barn doors open, and the stalls should be kept clean and sweet by the use of saw-dust, straw, or dry earth. We do not approve of using lime, ashes or anything of the kind as a purifier, for it is injurious to the hair and skin of the animals.

Where horses are made to stand upon a plank floor, the stable is liable to become very much more impure than under other circumstances, for the liquids will run through and form a pool beneath, which will continue to send up a noxious odor as strong as hartshorn. To avert this, fill the cavity below the floor with sods or loam, and clean the same out two or three times during the season. Thus a large amount of the very best of manure may be gained, and the comfort of the animals kept in the barn promoted.

The importance of cleaning the floor of the stable often, cannot be too earnestly urged, for in hot weather the collections here are alive with maggots in a few days, if left undisturbed, and this is a positive proof of its unhealthfulness and impurity. When the horse is not in use, the stall should be renovated morning and evening.

A San Francisco paper says that the Chinese control the pork trade of that city. Ninety-nine hundredths of all the pork and pork products pass through Chinese hands.

It is said that a sure way to cure bleeding combs of chickens is to sear the ruptured edges with hot irons.

A California ranch claims the shearing of two fleeces of forty-two pounds each from French Merinos.

Glanders and Farcy.

This is becoming a subject of much interest to farmers in Kansas as well as in other Western States. Like some other animal diseases, it seems to be travelling West. The subject is again called to our attention by a report (Bulletin, No. 16,) of the Missouri Agricultural College farm. Prof. Sanborn, in transmitting the State Veterinarian's report says that officer is called more frequently to examine cases of glanders than any other disease. The Veterinarian treats Glanders and Farcy as one and the same disease, showing themselves, however, in different ways. He defines them as "a constitutional, contagious and fatal disease, originating directly in the equine and asinine species, (horse, mule or ass,) and transmissible, especially by inoculation, so man, dogs, cats, sheep, goats, etc., and not to cattle, nor pigs, nor fowls. It is due to an animal poison which gains entry into the animal system, or, as some very able authors claim, is generated within it. The disease is named Glanders if the seat of the disorder is in the nasal cavities, throat, lungs, etc., and Farcy when it is in the skin, the tissues immediately under it (cellular) and the lymphatic vessels or glands, (organs carrying a white fluid called lymph.) In these instances it is also known as *button farcy*."

As in a case of many other diseases these two forms of this disorder show themselves in two forms—acute and chronic, and they are susceptible of clearly different descriptions. Symptoms of acute Glanders are a high temperature, accompanied sometimes by sudden sensations of cold, manifested by shivering; the nasal cavities become inflamed, assume a dark copper color with reddish or dark spots. These spots, probably, are caused by effusion of blood, and "the red spots or patches form pit-like, ragged edged ulcers," which, according to some authorities, sometimes "streaked with blood." Occasionally there is hemorrhage—nose-bleeding. The glands under the jaw swell, as do sometimes the lips and the head in front, below the eyes, and the cheeks. These symptoms are sometimes accompanied by a short cough, and in some instances the lungs are affected. When this latter case occurs, the breathing becomes more difficult. Dr. Paquin, whose ideas in the main, we are following, says he has noticed cases where the lungs were healthy, and still the breathing was very difficult and hard; this was due to the large quantity of matter in the nasal cavities and the cancerous growths extending far into the throat.

It is the opinion of eminent veterinarians that acute Glanders may appear primarily, but it generally follows the chronic form. The most common form is chronic in horses, while in mules the acute form mostly is seen. In the chronic form the first symptoms, usually are discharges from one or both nostrils. If from one only, it is apt to be the left one. After a while it becomes thicker, of a peculiarly sticky and gluey nature and adheres to the opening of the nostrils where it forms crusts which seem to contract them. The mucous membranes of the nasal cavities which, when healthy, present a pinkish hue, are paler at first and soon present a dull leaden or tawny (tanned-like) color. There is swelling of the glands under the jaw, but it is not always regular. It occurs sometimes "suddenly—from night to morning—and disappears gradually, to reappear later as rapidly again. In other

cases the enlargement is about the size of a walnut or of an egg; in single or double, or even present sometimes some lobules—like small attached glands—and adhere more or less firmly to the surrounding tissues. This form of enlargement is generally permanent. This is all that may be seen in many a case of glanders, and therefore, it is extremely difficult to pronounce a safe diagnosis, particularly if it be an isolated one which cannot be traced to contagion, and that no other similar cases can be traced to it." Ulcers appear in the nasal cavities, and discharges become frequent, the matter of them, when dropped in water, sinks.

In acute Farcy there is fever in the beginning, "the appetite is diminished and there is swelling of the extremities. Sometimes only one leg swells up to the body like in lymphangitis (so-called water farcy) and in other cases all the limbs are more or less enlarged. When the swelling subsides, we notice that the lymphatics look and feel like cords, and there is an occasional bud which generally comes to a point, break and discharge a thin yellowish matter, which forms a yellow scab over the ulcer, and stick to the hair surrounding. It occurs sometimes, that the first symptom noticed is a painful swelling on one limb, below the back of the knee; it breaks in time, suppurates and forms an unhealthy, ragged looking sore. Other swellings soon appear—very frequently on the same leg and go through the same process with the same results. Again, there are cases, in which the first symptom is a lameness in one leg—generally a hind leg—or soreness and swelling of the muscles of the neck, which may disappear suddenly. In rare instances, the malady is preceded by rheumatic symptoms and stiffness. In fact this affection presents itself in so many ways that it is apt to mislead the most experienced and careful observer."

As to chronic Farcy, it may come without warning, and it may follow the acute form. There is usually swelling about one or more of the fetlocks, usually a hind one, and a round, hard, nut-like mass may be felt which gradually softens, bursts and discharges the characteristic serous or glairy matter." Small lumps (farcy buds) appear about the hocks or other parts of the body. "By and-by," as stated by Prof. Low, "dropical swellings appear in the limbs and elsewhere, at first soft and removable by exercise, later hard and permanent. Sometimes the farcy buds fail to soften but remain hard and indolent for months."

As to treatment, Dr. Paquin agrees with veterinarians generally, that the most economic way to deal with it, is to destroy the animals as soon as discovered. Some claim that mild forms of button farcy can and have been cured. It is for the least, very dangerous to try a cure, unless the greatest precaution possible be taken not to communicate it to other animals or the attendant—although for a positive opinion in many cases suspected of glanders. In every suspicious case the history of the subject should be carefully investigated first, i. e., find out when and where the disease originated; whether there was any other similar case at the place at that time, or if any animals in the surrounding locality have lately died, whether it was communicated to any other horses, then look for the characteristic symptoms enumerated.

When several of the prominent symptoms exist and the history proves transmissibility, and fatality, there is no need of searching further. Every well thinking citizen having proofs that such a dreadful affection exists among his horses, mules, etc., should immediately kill, burn or bury them for, if he nurses them, he may favor the spreading of the virus among his other ones and among those of his neighbors and hence to many in his community.

The Stock Interest.

PUBLIC SALES OF FINE CATTLE.

Dates claimed only for sales advertised in the KANSAS FARMER.

October 28—Hon. T. W. Harvey, Burlington, Neb.
November 3 and 4—Inter-State Short-horn Breeders,
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S. E. Ward & Son, Short-horns, first Friday of Kansas
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Colic in Horses.

Horses, like men, are frequently troubled with pains in the stomach and bowels, and when we consider the complicated structure of the digestive organs, it does not seem surprising that an occasional ailment of this kind comes to pass. Here is a good article on the subject, copied from the *National Live Stock Journal*, of Chicago:

Every teamster, groom and stable-boy thinks he has a panacea for colic, but when we consider the number of different diseases in which colicky pains are present, and the utter impossibility of any person without either knowledge or experience in disease, forming a correct diagnosis, that is, distinguishing from the symptoms exhibited, the causes, location, and extent of the existing disease, the fallacy of placing reliance on the numerous stable nostrums and cures for colic that are vaunted must be at once apparent. We believe that many more animals die from the effects of the so-called remedies, ignorantly administered (although with the best intentions), than succumb to the original disease. Spasmodic colic in the horse, though often very alarming from the acuteness of the pain, as evinced by the poor animal's violent and uncontrollable action, will occasionally disappear of itself as suddenly as it arises, and any supposed remedy that has been given is apt, under these circumstances, to be deemed an infallible cure, and ever after advocated as such by the unthinking onlookers, in all cases where acute abdominal pain is apparent.

It is by far too much the custom to look at the organism of the horse as a clumsy machine that will bear any amount of dangerous drugs and rough treatment, in place of a beautiful and intricate structure, for which a rational knowledge of the laws of life and a calm judgment are necessary in order to intelligently administer to its diseases or derangements with any reasonable probability of success. Colicky pains are symptoms of a great variety of diseases or obstructions, usually of the organs of digestion, but occasionally they are symptomatic of disease in some other of the internal viscera.

Spasmodic colic consists in a spasmodic contraction of the muscular coat of the intestines, the intestines being made up of three coats, the external or a serous coat, then the muscular coat, and the internal one, a mucous or villous coat, and it is extremely probable that the excessive vascularity of the mucous or internal coat renders it liable to be in most instances the primary or original cause of this spasmodic contraction of the coat immediately adjoining it, the excruciating pain experienced being caused by this violent muscular contraction, just as the spasmodic contraction of an external muscle produces cramp. No structure or tissue of the body being without its appropriate purpose, the action of this muscle is, by its contractions and expansions, intended to assist in passing onward the intestinal contents. That this spasm of the muscular structure of the intestines does actually occur, we have proofs from the appearances that present themselves after death in fatal cases, as different portions of the alimentary canal have often been found forcibly contracted. We believe that this condition is more apt to occur in the small intestines than the large, although veterinary authorities are by no means unanimous in that opinion. It is certainly more liable to result in "intussusception" in the small intestines. This consists in a portion of the contracted part slipping within the more dilated part, and would almost certainly cause a fatal termination.

The causes of spasmodic colic are various. With some, a constitutional tendency from some hidden cause gives a predisposition to it, and in these it is often produced by causes that would have no effect on other horses. This predisposition often increases as the animal gets older, and the disease usually proves fatal eventually. Sudden changes of food, or a copious draught of cold water when the body has been

heated or exhausted by overwork or long-continued exercise, or cold applied to the skin by a cold rain when the body is in such a condition, may cause it, or even a change to cold, hard well water to which the animal has not been accustomed. A dose of physic may also cause it, especially if the animal has not been properly prepared for its administration, by having been fed on bran mash previously.

The symptoms are usually sudden in their appearance, and not marked by previous indisposition. The horse appears to be, all in a moment, attacked with sudden pain, shifting from side to side, pawing his litter, and stamping with his hind feet impatiently. After a short time the pain perhaps remits, and he resumes eating, and appears perfectly easy, or the paroxysms of pain may increase in severity; he may lie down, roll, lie on his back, sit on his haunches, get up and down, and throw himself about recklessly. These symptoms may return again and again, sometimes in an aggravated form, until the remissions from pain are not apparent and the animal dies from pain and exhaustion, or, in a more favorable case, in a modified form in which the paroxysms of pain are shorter and the intervals of ease longer, until they entirely disappear. During the paroxysms of pain the pulse increases in frequency and may become hard and full; the breathing also is accelerated and panting, but the animal temperature will not be increased. We do not believe that any position taken by the poor animal in its agony can be much relied on as diagnostic of any particular phase of the disease; lying on the back is a very common position, and appears to often give temporary relief, but a tendency to back up and press the hind quarters against the wall may almost be relied on as indicating impaction of the colon.

This disease is occasionally so slight that a single anti-spasmodic drench may perhaps give relief at once, or a spontaneous recovery may take place, as before mentioned, without anything having been given, so much is the constitution prone, in some cases, to assist itself or to assist our efforts. Other cases also frequently occur that are so obstinate and of so fatal a tendency as to require all our energies to combat. In all cases of this description, the administration of an aloetic laxative will be found the preferable mode of treatment. This is now the opinion of the most recent and most reliable authorities on veterinary medicine. Even if the animal should have recovered from the attack, it will be advisable to administer the laxative, with the view of preventing its recurrence, remembering the fundamental principle of all medical treatment, "remove the cause and the effects cease." The cause may be an irritant in the intestinal canal; certainly there is a deranged action of the organs of digestion; therefore clear them out so that they may be better able to retain their tone. It is well in most cases to combine with the laxative an anti-spasmodic and an anodyne to quiet the nervous excitement and relieve the pain. In obstinate cases, frequent injections of warm water should be given and the abdomen well rubbed with wisps; a strong ammoniacal liniment rubbed in or blankets saturated with hot water wrung out and applied to it. The animal should be placed in a roomy, loose box, well littered down, so as to prevent his hurting himself during the paroxysms, and on no account should an attempt be made to keep him constantly on his feet, although in slight cases a little walking exercise may have a tendency to reduce the spasm. With regard to the form of administering the purgative, some difference of opinion has been expressed; some prefer giving it in solution, others in the form of a "bolus." There can not be a doubt but that as a usual purgative it is better to administer aloes made up into a "bolus." But in cases of this nature we believe that by giving it in solution the probabilities are in favor of its being much more quickly absorbed. It must be remembered that the organs of digestion are for the time in a measure paralyzed, and that the ball may lie in the stomach, perhaps, for some time, almost intact. A good formula, and one which we often use, is composed of Barbadoes aloes, four to eight drachms; nitrous ether and laudanum, of each one to two ounces in a pint of water.

(Concluded next week.)

An Englishman said: "Show me a country with no grass, and I will show you a country with no cattle; no cattle, no manure; no manure, no farmers; no farmers, no nothing."

Pasture for Hogs.

A correspondent of the *Nebraska Farmer* says it is a mistaken idea that to fatten hogs rapidly it is necessary to feed them corn from an early date, some farmers feeding it to pigs that are scarcely three months old. After a certain period the more corn a pig receives the more is his constitution impaired, and it should be the aim of every feeder to delay this feeding until the latest moment, that before the time when it commences to deteriorate him he will be ready for market. Figures show conclusively that an acre of clover will produce one and a third pounds of pork to every pound produced by an acre of corn, estimating the acre of corn to yield fifty bushels. If a pig at two months old is turned into a clover pasture or a pasture of clover and blue grass and remains there until he is eight months old, he will have attained his growth and development and be in condition to receive a corn diet until ready to market. Moreover, during these six months in the pasture he will gain in weight to a surprising degree. It is estimated that an acre produces twelve thousand pounds of clover and that fifteen pounds of clover produces one pound of pork, or in other words we have eight hundred pounds of pork from an acre. If a bushel of corn will produce ten pounds of pork and the yield is sixty bushels to an acre, we have six hundred pounds of pork as the produce of an acre, but this yield is rather more than is usual. So much to show that a clover pasture produces more pork than the same ground in corn.

There are further reasons why pastures for pigs are very desirable. The exercise is very beneficial, as it assists in the development of muscles and bones; sunlight, fresh air and this exercise all tend to greatly improve their condition and make them thrifty animals. A feeder of much experience writes me that he turns all his spring pigs into a pasture when they are two months old and that six months later, when he commences to feed them corn, he has had them gain as much as fifteen pounds to the bushel for a period of fifteen weeks and has frequently sold them at that time when they averaged 340 pounds. He further says that he does not feed them more than ten bushels of corn apiece. This is economy in the production of pork, and as the price is based largely on the average cost of production this man has a larger percentage of profit than most feeders.

Trees and running water add very greatly to the utility of a pasture. Do not be afraid to let your pigs do a little rooting; it is natural to them that they should, and the more the pig is permitted to follow the dictates of his nature the more profitable he will become to the producer. It is a great mistake to undertake to produce live pork on principles of force. Nature rebels against any such actions, and it is better to encourage nature than to antagonize it.

Preserving Health of Swine.

Disease is more prevalent among swine than any other class of farm animals. As one animal cannot be *per se* more disposed to disease than another, this greater amount of disease among swine simply demonstrates that they receive treatment more calculated to endanger health than that bestowed upon other farm animals. This treatment consists in feeding, watering and sheltering; hence we must look to faults in these three things for the causes of disease.

In the matter of feeding one fault is readily apparent—monotony of diet. No other food so well suits the convenience of the swine raiser as does corn. Being composed of a relatively large proportions of oils and carbohydrates, it is especially well adapted to the production of fat; and as lard is the desideratum in hog feeding, corn is the swine

food for excellence. But this is no reason why it should be fed exclusively. The physical well-being of animals belonging to the higher orders demands a variety of food, and to this the hog is not an exception. Though corn is not calculated to derange the digestive organs, it would not be politic to feed it exclusively, because it alone cannot yield complete nourishment to the body. But corn has an astringent effect, producing constipation when largely consumed by swine, and as a good authority has lately expressed it, "half of what is cholera among swine is simply constipation." Other foods must be fed—giving complete nourishment to the body and loosening the bowels, if the health of the hog is preserved. To give these other foods is really no hardship, for always to feed them is profitable, and in a majority of cases they will make cheaper pork than will corn. Thus a splendid supplementary feed for swine are turnips, boiled and fed with some meal, or with bran, or with clover hay, also boiled. The turnips can be grown on land occupied the same season by early potatoes, and which otherwise would lie idle; and as the ground is prepared by a slight expenditure of labor and the crop requires no cultivation and is easily harvested, it forms a very cheap feed. Again, potatoes rendered unmarketable by reason of their small size form a splendid supplementary food when boiled and mixed with meal or bran; and as their only cost is that of gathering them up, and they are rich in heat or fat-formers they make cheap pork. To preserve the health of swine, it is essential to give a variety of food. It is also necessary to feed only sound and clean food; and we can certainly not complain when disease depopulates our herds for food so unsound that it will not be eaten by other farm animals is thrown to hogs in the mud, manure and effluvia of their pens. Instead of wondering at the amount of disease among swine, rather should we wonder that it is not greater. Filth and manure on the food is just as inimical to the health of swine as of other animals.

When we consider the quality of the drink supplied to hogs we have yet greater cause to wonder that the amount of disease is not greater. Horses, cattle and sheep are given comparatively clean water because they will not drink filthy water unless forced to do so and because the opinion justly obtains that foul water is to them destructive of health; but hogs are given, or rather circumstances are allowed to supply them with foul water because inherited tendencies and education are such that they will drink foul water, and because the opinion unjustly obtains that they are not so injuriously affected by foulness of drink as are other animals. But we certainly ought to know and certainly we are fast learning, that foul drink is just as productive of a diseased condition of the body when drunk by a hog as when drunk by a horse; and as we learn more of the nature and cause of swine plague we understand that so far as the health of the animal is concerned we would better give foul water to the sheep, cow or horse than to the hog, for foul water prolongs the life and favors the vigor of the *bacillus*, and when drunk introduces the germs of this most virulent of all swine diseases directly into the bodily organs. If we would safely preserve the health of our swine we will not force them to drink water from pools, ditches and creeks, but will supply them with water from a well protected from impurities.

On account of the compactness and fatty composition of its body and its pronounced gregarious disposition, the hog, when running in a herd, can endure more cold than any other of our farm animals, yet of all it is the most injured by a wet hide. The treatment given a hog is just such as would rightfully be accorded it if these conditions were reversed. Very little effort is made to protect the hog from chilly rains; but to preserve its health it must be favored with dry shelters. The hog is allowed to burrow up about straw-stacks, or it is given a liberal supply of litter along with its fellows in warm quarters; both of these lead to the overheating of the body and directly produce disease. To preserve the health of the hog give it only moderately warm shelter, and if one of a drove, no bed but dry earth. But keep all its quarters as clean as its food and drink.—*Cor. Indiana Farmer.*

No kind of stock should be allowed to eat young cherry shoots, for the leaves and bark contain considerable quantities of prussic acid, and are occasionally fatal to cows and sheep.

The Veterinarian.

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

GRAY CLYDESDALES.—Please tell me through your veterinary column if there is any such thing as a gray Clydesdale horse that is thoroughbred. [We know of full-blooded Clydesdales, imported, of a gray color. The common colors amongst that breed are bay and brown, with an occasional gray and sorrel.]

FISTULOUS TEAT.—One of my best cows had one of her teats cut on barbed wire about six weeks ago, and it has never healed over, leaving a hole about an eighth of an inch long, where the milk comes out almost continually. When she is milked the milk spurts out in a large stream. Is there any way of causing this hole to heal over? It is not raw or sore. [Make a fresh wound by carefully scraping the edges of the fistula. Make a stitch through the skin of the teat, drawing the edges together, but not too tight. Until healed, a milking tube should be inserted and held by a rubber band, not too tightly encircling the teat; close the orifice of the tube with a plug which can be removed at milking time. The treatment had better be conducted with the assistance of a physician.]

INCONTINENCE OF URINE.—I have a 3-year-old colt that was taken last summer with dribbling of the water. It ran from her all the time. A doctor helped her, but as soon as I turned her out, the trouble came on and he could not again stop it. He found the urethra thickened and full of mucus. [It is doubtful whether a case of this kind, of long standing, can be successfully treated. Internally, tincture of cantharides, in one-ounce doses, mixed with half a pint of cold slippery elm tea, may be given once daily during ten days, and repeated during a like time, after a fortnight. Besides this, frequent ice-cold water injections may be administered. Wash the limbs clean, morning and evening. Not knowing the cause of the condition, we can suggest no other special treatment.]

IRRITATION OF THE THROAT.—My horse, 8 years old, by spells will commence eating, then will throw up his head and snort, rub his lip violently and act as though there is something in the manger that he is afraid of. He feels well and works every day; has had some sort of a distemper; coughs once in a while; has been kept in the stable for nearly two years; his feed has been corn and oatmeal most of the time (from eight to twelve quarts per day), with all the good hay he will eat; he is in good flesh. [His actions are probably due to irritation of the throat. Stop feeding corn for the present and give a dose of the following, put well back on his tongue, four times a day: Powdered rhubarb, 2 oz.; powdered chlorate of potash, 4 oz.; powdered nitrate of potash, 3 oz.; sulphur, 4 oz.; cream of tartar, 4 oz.; mix. Dose, large table-spoonful.]

LOSS OF EWES.—I lost two ewes last week from some sort of stoppage. They were grazing in different fields. In the smaller stomach there was a hard ball nearly as big as one's hand. I may mention that one of the ewes, when grazing in the same field as the other one, lost her two lambs from stoppage of a similar kind, and was changed for the purpose of having a fresh lamb put on her. Can you give me any idea of what was wrong with my ewes. [Dryness of the pasture, presence of bitter herbs, too much hay and corn, are the frequent causes of dryness or caking of the food in the fourth stomach of ewes. Prevention—Give sappy food if possible, and allow rock-salt and access to water. Treatment—Quarter of a pound of salts, dissolved in a pint of warm water, carefully poured over the sheep's throat. In lambs, the disease is due to too rich or altered milk, which coagulates in the fourth stomach. Prevention—Change the grazing of the ewe, and give the lamb one to two ounces of salts.]

Save time and money by using Stewart's Healing Powder for cuts and sores on animals. Sold everywhere, 15 and 50 cts. a box. Try it.

The killing of sheep by dogs is usually done during the night. To guard against dogs the sheep should be induced to come up every evening to be fed inside of a high enclosure made of palings or wire, with an open shed in the center for protection to the sheep against storms.

Buckwheat.

Another crop which deserves more attention than it receives from farmers is the buckwheat. This can be sown later than any other grain crop, and is quite a certain one with anything like good treatment. The plant is one not easily imposed upon, and will often give good results on soils which will hardly produce anything else. For this reason it has come to be regarded in much the same way that the mule is by many—that it does not pay to give it good treatment, which is a wrong notion in regard to both. "Because buckwheat draws its food more largely from the atmosphere it will often give good returns when sown on poor soil; but it requires more or less food from the soil, and the richer and better condition this is in, the better will be the crop. It is not an exhausting crop on the soil, and is one of the best with which to reduce and make mellow a tough sod or stiff clay. It should not be sown early, as cool weather is needed to perfect the seed. Can be sown as late as the first week of July, which will bring the ripening period in the cool weather of the fall. It can be sown on any ground on which other crops have failed, or on that which was too wet in the spring to plow for corn or other crops. A good plan also is to sow buckwheat on land from which an early crop has been taken. An excellent way, if rotation of crops is practiced, and it should be by all means, is to turn over your timothy sod from which you have taken a crop of hay, and where you intend to plant corn next season, harrow with an improved disk or coulter harrow, sow on from two to three pecks of buckwheat seed. With good success you will get a yield of twenty or thirty bushels per acre, which is selling at the present time as high as \$1.25 per bushel. This will give you an extra and profitable crop from your land, and leave it in such a fine condition that a little harrowing in spring with one of the improved harrows, will put the field in splendid shape for corn. Plowing under a crop of buckwheat is a valuable means of enriching poor land. Buckwheat always finds a ready sale, as the supply is not equal to the demand. It is said to be equal if not superior to oats for horses, is good for hogs, and excellent for poultry. It forms a healthful and palatable food for the table; should be used more than it is.—Exchange.

To make Lima beans sprout, soak them in warm water until they are swollen; then pour off the water and lay a damp rag over them, and they will sprout in a few days.

Buckwheat and turnip seed for sale at the Topeka Seed House. Address S. H. Downs, Topeka, Kas.

Go out among the trees and vines at every opportunity; remove all suckers and shoots that are starting in places where they ought not to be; destroy all insect preparations.

T. E. Bowman, Topeka, makes loans on good farm securities, at moderate rate of interest and no commission. Correspondence solicited.

First-class railway carriages are not in favor in Germany. One of the best lines reports a yearly average of only three first-class tickets sold for every thousand passengers.

Mica Axle Grease is composed of the very best grease and powdered mica. Powdered mica is an almost perfect lubricant of itself. Mica Axle Grease reduces friction, keeps the axle cool and preserves it against wear.

Cleanliness is absolutely indispensable in the dairy. Wash in tepid water every dish, implement or utensil that comes in contact with milk or its products, then scald in boiling water or steam, rinse in cold water and expose to the air—and sunshine, if possible—until wanted for use.

There are few colleges in our country that can boast a musical faculty from the Boston Conservatory. This, in addition to the Literary and Fine Art facilities offered at the Illinois Female College, Jacksonville, and the personal interest taken in the pupils by the President, are prominent among the causes of its continued growth and popularity.

A gentleman at Germantown, Pa., who was greatly annoyed by the flocking of sparrows in large numbers to an ivy which covers one side of his house, got rid of them by sifting half a pound of red pepper down through the vine. The birds at once left in disgust and have not returned.

Read This.

We have a Nichols, Shepard & Co. 10-horse power Traction Engine, a Nichols, Shepard & Co. 36-inch cylinder Separator, a Keystone 6-hole Power Sheller, with water-tank on trucks, belting, jack, and everything to make a complete Steam Threshing and Corn-Shelling outfit. Engine and machines are practically new and in good working order. We will sell them at low prices for cash or on time payments, or trade them for good country or town property. For further particulars come and see us or address

IRON CLAD STORE CO.,
Wamego, Kansas.

BREEDERS' DIRECTORY.

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

HORSES.

FOR SALE.—On good terms, two Imported Clydesdale Stallions, with books of 1885 included. Both sure breeders. Can see their colts. For particulars address Robert Ritchey, Peabody, Kas.

THE IMPORTED CLYDESDALE STALLION.—"KNIGHT OF HARRIS" (No. 995 Clydesdale stud book), will stand this season at the stable of the undersigned, three miles west of Topeka (Sixth St. road). He is one of the best Clyde horses in America. Sire Chiefstain; grand sire, the great show stallion Topman. To insure, \$25. H. W. McAFEE.

CATTLE.

ASH GROVE STOCK FARM.—J. F. Glick, Highland, Doniphan county, Kansas, breeds first-class THOROUGHBRED SHORT-HORN CATTLE AND POLAND-CHINA SWINE. Young stock for sale. Inspection and correspondence invited.

WALNUT PARK FARM.—F. Playter, Walnut, Kas., breeds the largest herd of Short-horn Cattle in southern Kansas. Stock for sale. Cor. invited.

JOHNSON & WILLIAMS, Silver Lake, Kas., breeders of Thoroughbred Short-horn Cattle. The herd numbers thirty head, with a Rose of Sharon bull at head.

OAK WOOD HERD, C. S. Eichholts, Wichita, Kas. Live Stock Auctioneer and breeder of Thoroughbred Short-horn Cattle, Poland-Chinas & Brnzse Trkys.

DEXTER SEVERY & SONS, Leland, Ill., breeders of Thoroughbred Holstein Cattle. Choice stock for sale, both sexes. Correspondence invited.

CEDAR-CROFT HERD SHORT-HORNS.—E. C. Evans & Son, Prop'r, Sedalia, Mo. Youngsters of the most popular families for sale. Also Bronze Turkeys and Plymouth Rock Chickens. Write or call at office of Dr. E. C. Evans, in city.

T. M. MARCY & SON, Wakarusa, Shawnee county, Kas. We now have 116 head of recorded Short-horns. If you wish a young bull or Short-horn cows do yourself the justice to come and see or write us.

BROAD LAWN HERD of Short-horns. Bobt. Patton, Hamlin, Kas., Prop'r. Herd numbers about 120 head. Bulls and Cows for sale.

ATAMAH HERD, W. H. H. Cundiff, Pleasant Hill, Cass Co., Mo., has fashionable-bred Short-horn Bulls for sale. Among them are two Rose of Sharon and one aged show bull. None but the very best allowed to go out from this herd; all others are castrated.

U. P. BENNETT & SON, Lee's Summit, Mo., breeders of THOROUGHBRED SHORT-HORN CATTLE, Cotswold sheep, Berkshire swine, Bronze turkeys and Plymouth Rock chickens. Inspection invited.

POWELL BROS., Lee's Summit (Jackson Co.), Mo., breeders of Short-horn Cattle and pure-bred Poland-China Swine and Plymouth Rock Fowls. Stock for sale. Mention this paper.

W. A. POWELL, Lee's Summit, Mo., breeder of the Poverty Hill Herd of Thoroughbred Short-horn Cattle. Inspection and correspondence solicited.

J. W. LILLARD, Nevada, Mo., Breeder of THOROUGHBRED SHORT-HORNS, A Young Mary bull at head of herd. Young stock for sale. Satisfaction guaranteed.

CATTLE AND SWINE.

COTTONWOOD FARM HERDS, J. J. Malls, Manhattan, Kansas, Breeder and shipper of SHORT-HORN CATTLE and BERKSHIRE SWINE. Orders promptly filled by express. The farm is four miles east of Manhattan, north of the Kansas river.

D. R. A. M. EIDSON, Reading, Lyon Co., Kas., makes a specialty of the breeding and sale of thoroughbred and high-grade Short-horn Cattle Hambletonian Horses of the most fashionable strain, pure-bred Jersey Red Hogs and Jersey Cattle.

SHORT-HORN PARK, containing 2,000 acres, for sale. Also, Short-horn Cattle and Registered Poland-China. Young stock for sale. Address B. F. Dole, Canton, McPherson Co., Kas.

GLENVIEW FARM, G. A. Laude, Humboldt, Kas., breeds Short-horn Cattle and Poland-China Swine. Also Saddle and Harness Horses.

I HAVE 10 young pure-bred Short-horn Bulls, 10 Cows and Heifers, a few choice Poland-China Boars and Sows—the latter bred for sale. Send for new catalogue. H. B. Scott, Sedalia, Mo.

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

WOODSIDE STOCK FARM.—F. M. Neal, Pleasant Run, Pottawatomie Co., Kas., breeder of Thoroughbred Short-horn Cattle, Cotswold Sheep, Poland-China and Berkshire Hogs. Young stock for sale.

SWINE.

CATALPA GROVE STOCK FARM, J. W. Arnold, Louisville, Kansas, breeds Recorded

POLAND-CHINA SWINE AND MERINO SHEEP. The swine are of the Give or Take, Perfection, and other fashionable strains. Stock for sale in pairs not related. Inquire correspondence or inspection of stock.

A. J. CARPENTER, Milford, Kansas, breeder of A. Thoroughbred Poland-China Swine. Stock for sale. Inspection and correspondence invited.

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

F. M. ROOKS & CO., Burlingame, Kas., Importer and breeder of Recorded Poland-China and Large Berkshire Swine. Breeding stock the choicest from the best herds in seven States. I have special rates by express. Write.

J. A. DAVIDSON, Richmond, Franklin Co., Kas., breeder of POLAND-CHINA Swine. 170 head in herd. Recorded in A. and O. P.-C. R. Call or write.

ROBERT COOK, Iola, Allen county, Kansas, importer and breeder of Poland-China Hogs, Figs warranted first-class. Write.

SWINE.

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

F. W. ARNOLD & CO., Osborne, Kas., breeders of Poland-China Swine. Stock recorded in O. F.-C. E. Combination 4989 (first premium at State fair of 1884) at head of herd. Stock for sale. Satisfaction guaranteed.

POLAND-CHINA SWINE.—Of the most noted strains. My breeders are from herds that can show more prize-winners than any other in the United States. Liberal reduction to persons ordering in next thirty days. Photograph of a few breeders free. Address me before buying elsewhere. Special rates by express. [Mention this paper.] H. H. WALLS, Bedford, Indiana.

POULTRY.

ONE DOLLAR per thirteen for eggs from choice Plymouth Rock fowls or Pekin ducks. Plymouth Rock cockerels \$2 each. Mark S. Salisbury, Box 981, Kansas City, Mo.

NEOSHO VALLEY POULTRY YARDS.—Established, 1870. Pure-bred Light Brahmas, Partridge Cochins, Plymouth Rocks. Eggs in season. Stock in fall. Write for prices. Wm. Hammond, box 190, Emporia, Kas.

N. E. NYE, breeder of the leading varieties of Choice Poultry, Leavenworth, Kansas. Send for circular.

W. M. WIGHTMAN, Ottawa, Kansas, breeder of high-class poultry—White and Brown Leghorns and Buff Cochins. Eggs, \$2.00 for thirteen.

EGGS FOR SALE.—From Light Brahmas, Buff Cochins and Plymouth Rocks, 13 for \$1.75; 26 for \$3. Also Pekin Duck eggs, 11 for \$1.75; 23 for \$3. Also Emden Geese eggs, 8 for \$2; and Bronze Turkey eggs, 12 for \$3. W. J. McColin, Waveland, Shawnee Co., Kas.

J. M. ANDERSON, Salina, Kas. Bronze Turkeys, Plymouth Rocks, Pekin Ducks, Shepherd Puppies and Jersey Cows and Heifers. Write for prices.

FAIRVIEW POULTRY YARDS. Write postal for price list of fowls and eggs. Six varieties. Mrs. Geo. Taggart, Parsons, Kansas. Lock box 744.

PLYMOUTH ROCK CHICKENS. Eggs for hatching, from the finest breeding pens in the United States. Fowls have taken first premium wherever shown. Eggs safely packed for shipment. Setting of 13, \$1.50. Fowls for sale in the fall. Address E. W. Stevens, Sedalia, Missouri.

MRS. T. W. RAGSDALE, Paris, Mo., breeder of Light Brahma Chickens and Bronze Turkeys—400 best. Eggs, \$2.50 for 13.

GEO. H. HUGHES, North Topeka, Kas., 14 first prizes (Felix and Pierce, Judges,) on W. F. B. Spanish, & P. Rocks. Eggs, \$3 for 13; 26 for \$5. Prepared shell, 100 lbs. \$3. 12 egg baskets, 90 cts. Poultry Monthly, \$1.

MISCELLANEOUS.

OSWEGO TILE FACTORY.—H. C. Draper, Prop'r., Oswego, Kas. Best shipping facilities over Missouri, Pacific and Frisco railroads. Write for prices.

S. A. SAWYER, Manhattan, Kas., Live Stock Auctioneer. Sales made in all the States and Canada. Good references. Have full sets of Herd Books. Compiles catalogues.

REPUBLICAN VALLEY STOCK FARM.—Henry R. Avery, Wakefield, Clay Co., Kas., breeder of Percheron horses. Stock for sale. Send for catalogue.

MERINO SHEEP, Berkshire hogs and fifteen varieties of high-class poultry of the best strains. Bucks a specialty. Harry McCullough, Fayette, Mo.

PROSPECT FARM.—H. W. McAfee, Topeka, Kas. For sale cheap 15 registered Short-horn bulls, 1 to 3 years old. Also, Clydesdale horses.

Goodwin Park Stock Farm, BELOIT, : : : KANSAS.

ABERDEEN-ANGUS CATTLE!

A few tip-top YOUNG BULLS, at low figures and on easy terms. We offer a few CHOICE FEMALES from our show herd, for sale for the first time. Two well-bred SHORT-HORN COWS at a bargain. Two standard-bred

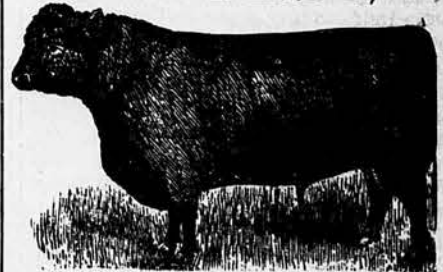
HAMBLETONIAN STALLIONS,

at bed-rock figures. There are few better-bred Trotters in Kansas.

GRADE ANGUS and GALLOWAY cows at farm-ers' prices. Send for Catalogue.

J. S. & W. GOODWIN, JR.

F. McHARDY,



Breeder and Importer of GALLOWAY CATTLE, Emporia, : : : Kansas.

My herd numbers over one hundred head, consisting of the best and purest strains of blood. It is composed of animals bred by the most noted breeders of Scotland—the Duke of Buccleuch, the Earl of Galloway, Thos. Bigger & Sons, Cunningham, Graham, and others. I have thirty head of young bulls, fit for service, sired by the noted bull MacLeod of Drumlanrig; also thirty high-grade females of different ages that I will sell reasonably. Time given to suit purchaser, if desired.

Correspondence.

Report From Ness and Lane Counties.
Kansas Farmer:

Your readers will remember that this section once had a first-class reputation as a dry country; well, it has lost that reputation. Heretofore a known fact, it became doubtful a year or two ago, and now is entirely lost. Some are a little sorry, as the aforesaid loss involves a loss of nutrition in the wonderful buffalo grass; it involves, as well, the loss of large ranges to stock men, and places the price of deeded lands above "low water mark," so that it costs more to own the pasturage; it also seems to increase the rigors of winter. Yet, it more than compensates for all this in the added blessings to mankind at large. Stock raising will go on, though on a different basis; thousands of poor men will be enriched by the increased value of their lands; homes will be established where buffalo and cattle roamed; the wonder and attention of the world will be attracted hither; fields of grain and groves of trees will be seen far and near; towns will dot the plain, and this will be as good as any other country.

The present summer is a moist one, so far. Corn looks black and rank. Vegetables are plentiful. Fruit and "forest" trees are thrifty, and all in all, this is a very good country to live in. Immigration to Ness and Lane is increasing; not always a rush, but steady. Much of it is of that healthy sort that comes from Eastern Kansas. We say healthy because Kansas men come with that knowledge of Kansas and her peculiarities, with that experience in Kansas methods, and with that cheerful determination which will make Western Kansas ten years hence what the Eastern part of the State is to-day. Lands will certainly be valuable in this locality. The soil is black and rich, and we look to see prices, after a while, as they are in the counties on the eastern border. JOHN H. Dighton, Lane Co.

From Brown County.

Kansas Farmer:

This has been a busy season thus far for the farmer. Opening late, they were behind in the start. In May we had several heavy showers, and as the ground was yet cold, much of the corn rotted; and again later, heavy rains washed out considerable corn, so that much corn was planted a second time, and then replanted. The corn, therefore, mostly is somewhat backward and much of it a thin stand. But what there is is doing well during this warm and showery weather.

Fall wheat does not amount to much around here. Much was listed up and put into corn when it appeared that more cheat (or chess) than wheat headed out. The few fields that are left still contain a large per cent. of chess. The grain, however, is plump so far as I saw it. Spring wheat and oats is good; acreage small. Wild and tame grass is excellent. Strawberries did remarkably well. Other small fruit is also making a good show, though many of the blackberry canes froze last winter. Apple trees are tolerably well loaded with fruit. A great many of the trees are badly blighted. The health of stock is generally good.

In the southwest part of the county diphtheria has prevailed extensively, one family losing three children inside of a week.

At the sale of Short-horns by Dr. R. Patton, of Hamlin, the bidding was brisk, prices moderate; getting lower towards the last. Heifers brought the best prices; bulls sold the lowest. A fine lot of cows with young calves were sold. The bulls were not as good as the cows. One good feature is noticed about the sale. As the postoffice address of the buyers was given, they were all of Brown county or adjoining. While the cattle disease is threatening, it is best to buy near home.

Mr. Patton closed the sale as the prices got too low; seven of the seventy-five advertised being left unsold.

H. F. MELLENBRUCH.

Carson, July 11.

Crops and Stock in Ellsworth County.

Kansas Farmer:

The wheat harvest is now over. Out of over 500 acres in this locality, over 100 acres was not cut, and of what was harvested, the

most sanguine are not estimating the yield at over ten bushels; generally the estimate is under ten. Oats head out low and are generally light. Corn is splendid; it was never better at this season of the year. Potatoes are a fair crop. Grass is good and stock is healthy. Farmers are plowing for fall wheat. The web worm has not put in an appearance in the east end of this county. W. S. GILE.

Venango, Ellsworth Co.

About Making Roads.

Kansas Farmer:

Farmers have the credit of being very slack when they work on the highway; but my experience is that they work as well there as on their farms. I think the greatest trouble is that very often the poorest men we have for that position, are chosen for Road Overseers. The idea being prevalent that there is no honor or money in it, it is pushed on to any one that will take it. Now, to be a good Overseer, a person should know something of civil engineering, and also have the faculty of managing men, two qualities that not every one has. There is not so much want of work as there is time and labor thrown away by inexperienced persons. Very often a little work at the right time will improve the roads wonderfully. For some years there has been deep ruts wearing in the road between one of my neighbors and myself, and after nearly getting his neck broke, he came over to have me help him fix the bad places. With a breaking plow and a good team, in about two hours we succeeded in leveling forty rods, taking a spade at the last to straighten the sods and fill up little holes; so it was smooth enough, then, and ever has been since, to drive fast over at any time. And all over the country are just such places, that go year after year, because people think it a great deal more work to repair them than it really is. Most of the low spots in the roads can be drained much more easily than they can be fixed any other way. Very often a ditch a foot deep, close to the fence, will drain off all the water; and then, by turpliking it up some, will make a good road, while generally only the latter is done, and the water stands at the sides of the road, soaking up the under side, and with all the work, the road is muddy nine months in a year and rough the remainder.

Last year we drained a low place in the road, that had been an eye-sore for years, by plowing a deep furrow from the lowest spot straight out into the field, fifteen rods, where it emptied into a ravine. A ditch along the hedge, eighteen inches deep, for 200 yards, will be the permanent way, which will have to be done by plowing a few furrows and scraping out the dirt.

E. W. BROWN.

Some Stock Notes.

Kansas Farmer:

The premium list of the Western National Fair Association, Lawrence, Kas., whose fair occurs in September, requires that all Berkshires competing for premiums must be eligible to registry in the American Berkshire Record.

A correspondent, writing from Missouri, says: "We are using a ham that weighed fifty pounds, closely trimmed, tender and fine, from a Berkshire pig eighteen months old. Rather heavy for a small Berkshire!" Yes, too heavy. We should have preferred to shorten that pig's life by about half, thereby saving one winter's feed and keep, and having the hams, when cured, of less size and at less expense.

Some one, in describing a model hog pasture, mentions as one grand requisite, a small stream of water that will afford wallowing places for the hogs. This may do well enough where swine-plague has never been known, but wherever it has once been known, these small streams are among the surest means of its continuance and spread. Beware of sluggish streams and pools of standing water, particularly toward the latter part of the summer and in the fall. Keep the hogs away from all such places and see that they are supplied with good water from the well, daily.

The late Illinois Legislature may not have been a model of perfection in a popular sense, but it will be known in history as a pioneer worker in the extirpation of contagions or infections from among the live stock of the country. It has given us a good law, and under this law the Governor has

appointed a good Board of Live Stock Commissioners, in the persons of J. M. Pearson, S. W. Smith and Hiram McChesney. The regular meetings of the Board will be held in Springfield on the first Wednesday in each month. And now the cattle interest looks up once more as the feeling of safety under the new order of things pervades the land.

Another importation of Cleveland Bays will reach this city (Springfield) by the 21st of this month. The London *Live Stock Journal* mentioned them as they left Liverpool, the 1st of this month, as five grand two-year-old stallions and several mares of the best Cleveland blood, most of them being entered in the "Blue Book" of the New Cleveland Bay Society. Central Illinois has in times past welcomed to its broad rich pastures improved stock of every kind. Now that the Cleveland Bay is fast coming into favor in America, we are glad that Messrs. Stericker Bros. are making for him a home at this point.

PHIL THRIFFTON.

Springfield, Ill.

Fall Plowing.

Kansas Farmer:

Every intelligent farmer tries to improve his methods by experience and the experiments of different methods. It is a generally admitted fact that fall plowing pays; but the evidence never becomes so plain as when two pieces of land in the same field are tested, the one fall plowed, and the other not.

Last year, in July, we plowed one-half of a piece of stubble ground. This spring we plowed the whole piece again, sowing in oats and spring wheat. It is now evident that the oats on the fall plowed land yields at least a third more.

It pays to fall plow, especially to do it early, so as to destroy the seed before ripe. As the stubble-fields are being emptied now it will be well to start the plow as early as possible.

I had a little boy drop early corn in the furrow of one acre of the fall plowing above mentioned, which though never cultivated, made good fodder. H. F. M.

Gossip About Stock.

Shockey & Gibb, Lawrence, write that they are having a fine engraving made of their noted Hereford bulls Beau, Real and Beau Monde. They are royally bred animals and heavy weights.

T. M. Marcy & Son, Short-horn breeders, Wakarusa, Kas., write from Council Bluffs that they have sold a car load of yearling bulls to R. Daniels, Gilmore, Neb., and will bring back a fine Norman stallion.

A. F. McCaslin, Topeka, reports the sale of his 2600 pound four-year old Short-horn bull, Leslie Hopewell, 11148 to Mr. Lantry, of Strong City, Kas., for \$275. The bull was a fine specimen of the breed and used at the head of Mr. McCaslin's herd.

Walter Morgan & Son, Irving, Kansas, write that they have shipped two car loads of fine Hereford heifers and bulls to Denver. We have been raising Herefords since 1859, and have a remarkably fine herd which we will be glad to show to any one.

Manhattan *Republic*: On Monday 1,886 head of choice three and four year old grade steers were received at Manhattan from New Mexico, 1,165 for the British Land and Mortgage Company, E. B. Purcell, general manager, 500 for Maj. N. A. Adams, and 220 for C. M. Gifford & Sons.

Montrose (Colo.) *Republican*: Eighteen thousand Texas cattle have been turned upon the Weld county range of this State the present season. . . . Six hundred and seventy thoroughbred bulls have been sold in Colorado the present season, at an average of \$283 each. . . . From all quarters of the State cattle have never been in better health. It is not quite late enough for black-leg, and there is no fever yet apparent.

The Dodge City *Live Stock Journal* says: The drive north of steer cattle by our local ranchmen is likely to create a revolution in the stock industry as formerly carried on between the States of Texas and the Northern States and Territories. Already a much larger number or stock is being shaped up for this march northward than was at first anticipated by us. The threatened influx of Texas cattle from the South and the pressure of immigration from the North very materially reduces the grazing lands in this

section, which, without this double invasion, was barely large enough to sustain the stocks of cattle already located.

Last week's receipts of live stock at the Kansas City Stock Yards was 674 sheep, 1,349 horses and mules, 7,347 cattle and 51,816 hogs.

Mr. J. Gordon Gibb, of the firm of Shockey & Gibb, breeders and importers of Hereford cattle, at Lawrence, Kansas, will sail for England next week to bring over some choice Hereford heifers with which to augment their already fine herd of these famous white faces.

Ex.: Of 555 head of hogs recently shipped from Mankato by the Farmers' Shipment Association only one died in transit to Kansas City. Mr. White, the manager, says the commission men at Kansas City agree that it was an unprecedented small loss for the time of year, and hardly ever equaled even in cold weather.

Last week E. Bennett, of Topeka, left for Montreal, to meet his importation of Clydesdale stallions and mares, forty in number, that his son, R. E. Bennett, bought in Scotland and shipped via Montreal, after which he left for France to purchase a number of the famous Percheron-Norman stallions. Messrs Bennett & Son expect to arrive in Topeka with their imported horses about September 1. They cordially invite all interested in the improvement of horses to call and see them.

Wichita *Eagle*: A gentleman who owns cattle in the Territory arrived here yesterday and in conversation with an *Eagle* reporter said that no one save the cattlemen knew how great the loss in stock was in that country. One firm lost 20,000 head and all lost fully fifty per cent. of their stock last winter. Some cattlemen have borrowed money on their herds and don't want it known that the mortality among them was so great. Our informant lost over one-half of his own cattle and he don't think the cattle monopoly is any big thing. The loss was not from stealing, but from exposure last winter.

Breeder's Gazette: Col. W. A. Harris, of Linwood, Kas., reports the following sales from the Linwood Herd of Short-horns, since June 3d: 2d Baronet of Linwood (yearling Young Mary by Baron Victor), to Frank Playter, Walnut, Kan., for \$400; 3d Baronet of Linwood (eight-months Young Mary by Baron Victor), to S. T. Shankland, Ft. Scott, Kan., for \$300; 27th Duchess of Gloster and Lovely 41st, (imported Crutchshank yearlings at \$600 each), and a yearling Josephine heifer by Baron Victor, for \$400 to William P. Higinbotham, of Manhattan, Kan., making a total of thirty head sold since January 1, 1885, for \$10,605, an average of \$353.50.

The Kansas Frontier Stock Association at Zamora adopted the following:

WHEREAS, It has been a matter of public notoriety that a number of herds of Texas cattle have been driven through Finney and Hamilton counties, Kansas, in violation of the laws of this State and against the protests of the citizens of the aforesaid counties, we the members of the Kansas Frontier Stock Association, now in convention assembled to consider the above question, do

Resolve, 1st, That we will hereafter oppose the driving through of such cattle in violation of the law, by any and all lawful means necessary to abate the nuisance, and we unanimously pledge our services to that end.

Resolved, 2nd, That the Governor of the State of Kansas be requested to cause the law of the State of Kansas to be executed, and to give instructions to the officers of Finney county to that effect.

Scott Fisher, Holden, Mo., writes to the *Swine Breeder's Journal* about one of our Kansas breeders, and an advertiser in this paper, as follows: I have often read articles where a minute description of some breeder's herd was given and it would seem to me almost impossible for a herd of swine to be so near perfect. But I have changed my mind since visiting the herd of I. L. Whipple, of Ottawa, Kan., where I had the pleasure of seeing some of the finest specimens of hogs I ever gazed upon. It is useless for me to enter into a description of this herd, but will say that he has about fifty of the best brood sows that money could buy. He has also a fine lot of pigs from which the writer made a purchase of three that please him so well, twice the money he paid for them would not buy them. Mr. Whipple has at the head of his herd his prize boars, Ottawa King 2885, the next is Jayhawker 2637, Ben Butler 2077; and the noted Governor Cleve-

land. All of these are fine hogs and excellent breeders. Mr. W's facilities for feeding are excellent, he has a sheller, grinder and steamer. His hogs have never had the fatal disease called swine plague. He keeps them in a healthy condition by feeding wood ashes, salt, sulphur and coppers all mixed. This he keeps constantly in a trough where his hogs can have free access to. He is counted by the people of Ottawa as the leading Poland-China breeder in Kansas. He also has a fine lot of Duroc-Jerseys. He is comparatively a stranger to me but was highly recommended by the leading business men of Ottawa.

The public sale of Short-horn cattle by A. H. Lackey & Son, Peabody, Kansas, July 16, was fairly well attended, the busy season considered. The cattle offered were in average condition and consisted mainly of females of all ages and breeding. Everything considered, and for the class of cattle offered, it was as good a sale as has been made this season. The sensation of the sale was the spirited bidding on a model six-months' bull calf sired by the Cruickshank bull, Barmpton's Pride. He was knocked off to J. H. C. Brewer, a Peabody merchant. The total sales amounted to over \$5,000. Fifty-two females, average \$85.40, selling at the extreme range of \$40 to \$1.65, most of which were bred or had calves by their side. Ten bulls sold from \$25 to \$175, making an average \$57.50.

The editor of the Valley Falls *Era* visited the breeding establishment of Wm. Booth, Winchester, Kansas, and writes: Mr. Booth, has a herd of 170 thoroughbred and high-grade hogs, of the Berkshire, Poland-China, and Yorkshire breed. Of these he will exhibit a large number at our fair this year. His method of feeding seems to meet with the best results. He gives but very little corn, the principal diet now being green rye and oats and swill, in which, to guard against disease, he mixes wood ashes twice a week, alternating with coppers twice a week, sulphur and crude carbolic acid once a week each. This mode of treatment seems to keep Mr. Booth's hogs perfectly free from disease, while neighboring herds are carried off by the score without it. He is having a large demand for his hogs now, and they appear to give the best of satisfaction wherever sent.

Messrs. Walter C. Weedon & Co., Kansas City, Mo., report the following recent sales of Galloways and Angus: Galloway bull, Socrates 1844, and Galloway heifer, Mary Henderson 1860, to Alex S. Judy, Burr Oak, Kas.; Galloway bulls Millionaire 1841, and Masterpiece 1840, to A. B. Mathews, Kansas City, Mo.; Galloway bull, Garden Gern 1833, to Thompson Bros., Hammond, Kas.; Galloway bull, Keunure of Glenlee, 1839, to Ed. A. Boyle, Snyder, Colorado; Galloway bull, Glen of Glaisters 1837, to H. Mashenke, Eureka, Kas.; Galloway bull, Gilnocky of Knells 1836, to J. W. Corrile, Kirwin, Kas.; five choice Angus heifers and three bull calves to A. B. Mathews, Kansas City, Mo.; among this lot was the Scotch prize winner as a yearling, Madam Sherrington (5805) 2661; and Galloway heifer, Lizzie of Wardrew 2d, 1853, has dropped a fine bull calf out of The Piper of Sewingsheds 1820.

Cattlemen in the southwestern part of the State are having a good deal of trouble with the Secretary of the Interior. They do not believe he knows anything about the actual situation as to the trouble in hand, and furthermore, they have about concluded that he does not know how to handle it if he did know. It is asserted that Southern cattle of the dangerous kind are being driven about over leased ranges, and that is objected to. The Secretary has been requested to stop it. He does not seem to understand that there is no objection to cattle following the old trail to Colorado. He directs that the old trail be kept open, and nobody is objecting to the use of that trail. Nobody is complaining that it is not kept open. The ranchmen do not want Texas cattle of the infected kind to be driven over their ranges, and they will not submit to it. They have driven back several herds, and are prepared to repeat the performance as often as necessary.

State Fair of Kansas.

Some little time after it was definitely understood that no State Fair would be held at Topeka, the rumor became current that a State Fair would be held at Peabody, under the auspices of the Marion County Agricultural Society; so, accordingly, a representative of the KANSAS FARMER called upon the Secretary, Dr. L. A. Buck, Peabody, to ascertain the facts concerning the report and the intentions of that enterprising and successful fair association.

During an extended interview, the writer learned that the Society, having assured itself that no State Fair would be held at Topeka, conceived the idea of holding one at Peabody, and at once set about to ascertain the sentiment of adjoining counties and the Topeka Association concerning the venture. The result was so encouraging that a meeting of the business men of Marion county and Peabody was called and a guarantee fund secured and deposited in the bank. The Society has always paid every cent of its indebtedness and has a good credit, and this, in connection with the liberal premiums offered and the guarantee fund secured, exhibitors of all kinds may rest assured of fair treatment and prompt payment of all premiums.

Peabody has become very prominent throughout the country as a fine stock center and is well located for a grand exposition. The trains arrive and depart, both east and west, in the morning and again in the evening, making it very convenient to spend a day at the State Fair, which will be held September 1, 2, 3 and 4. Competition is open to the world, and liberal purses and premiums are offered. Special passenger rates are offered, and all freight or stock exhibited will be returned free. Exhibitors can go direct to the Western National Fair at Bismarck after the close of this fair. Let everybody turn out, and make a State Fair in fact at Peabody, that will advertise the State by being one of the most successful exhibitions of the kind ever held in the State.

For premium lists and full particulars, mention the FARMER and address T. M. Potter, President, or Dr. L. A. Buck, Secretary, Peabody, Kansas.

Economizing Time on the Farm.

It is easier to preach than to practice, according to the old saying. That depends somewhat upon the capacity of the preacher. If he is a good preacher, he probably does his work easily, just like a good practitioner does, and in that case his preaching is worth listening to.

"How to use time to the best advantage in the busy season of the year, is what every farmer should study well," says a good agricultural preacher, the Germantown *Telegraph*. "It is not enough that he works hard all day long, scarcely taking time to eat his meals, if his work is not done right, in the right time and in the right way. Doing the work in the right time will save much unnecessary labor, by keeping all kinds of farm implements ready for use whenever needed; keeping fences up so as not to be troubled with runaway cattle; but especially in the raising of crops is it necessary to be in time, both in seeding and harvesting, and keeping the weeds down from the spring of the year, so as not to let them get a start, or they will be hard to conquer later in the season.

"To do things in the right way includes a great deal, and only the outlines can be given in a short article like this. The first is to do one thing at a time and do it thoroughly, not be shifting from one work to another, for in this way much time is lost. One thing which is much overlooked is to have everything handy; have all kinds of feed close by where it is to be fed; have the corner near to the hog pasture, the hay close to the barn or stable, and water both for cattle and house use near at hand, for in this way it will not take more than half the time to do chores as it will if everything that is fed must be carried, even if not thought to be far. It is surprising how much time will be walked away for nothing in the course of a year. Order should be strictly observed in everything, in having a place for all kinds of tools, and having them in their place when not used. While no method can be mechanically followed in dividing up the labor on the farm, still it can be arranged by establishing certain rules so as to save much time. In this way

more can be done in ten hours' work than in fourteen hours where no order is followed; therefore it is necessary to plan well before commencing on all kinds of work."

Lecture on Out Worms.

Extracts from a paper by Dr. J. A. Lintner, read before the New York State Agricultural Society.

More has been charged upon cut worms than properly belongs to them. The secret manner in which they prosecute their work under cover of darkness, and often beneath the surface of the ground, rarely permits them to be detected in their operations. Roots are eaten and young blades and shoots are cut off, and the unknown predator is pronounced a cut worm. Often in these cases the depredations proceed from the white grub, or one of its many allied forms, or from some species of wire worm.

Cut worms are caterpillars of moths that belong to the great family of *Nuctuidæ*, which embraces a large proportion of our night-flying species of *Lepidoptera*. The following are the principal features of the typical cut worm, by the aid of which it will not be difficult to recognize them. When full grown they measure from 1½ to nearly two inches in length; they are sixteen footed (three pairs of true legs and five pairs of prop-legs), thick, tapering moderately at the extremities, naked and greasy looking. In color they are dingy-brown, gray or greenish, with indistinct, light and dark longitudinal markings. The head is large, shining, and usually red or brown. When the caterpillar is taken from the ground, or otherwise disturbed, it curls itself into a ring.

They are nocturnal in their habits, passing the day in concealment in holes made by them in the ground, among or near the roots of their food plants, or in other shelter beneath stones, sticks, rails, decomposing leaves and grass. Most of them come forth from the ground after dark. If, during the time of their abundance, search be made for them at night, with the aid of a lantern, hundreds of them may be discovered in their destructive work. At the approach of day they retire to their hiding places, which may frequently be detected by the hole near the plant made by them in re-entering the ground. The time of their greatest injuries is when they are nearly full grown, in the months of May and June.

Most of the moths are nocturnal. A few species fly by day, and may be found during the autumnal months feeding upon the nectar of the flowers, as upon that of the golden-rod. But by far the larger number go abroad only at night to feed, passing the day in various hiding-places. The eggs from which the caterpillars proceed are placed usually upon some low plant, whence the young, when hatched, may easily reach the food that they require. The usual time for egg depositing is the latter part of summer, hatching soon after, early in the autumn. The larvae enter the earth and commence to feed upon the tender roots of various plants. At this stage of their life they are very general feeders. At the commencement of winter, as the frosts penetrate and chill them, they having become half grown, descend into the ground to the depth of six or eight inches. Here they shape for themselves an oval cavity, within which they curl up in a torpid state for their winter sleep. Freezing fails to harm them if undisturbed. In the spring, when the frost leaves the ground, they are awakened to activity, ascend to near the surface, and resume their feeding upon the roots of the starting vegetation. When fully grown they descend into the ground to a greater depth than before. The abundance of cut worms is not dependent upon or materially influenced by the character of the soil. One observer says he never found them more plenty than one occasion among beans, planted upon a hillside so barren that scarcely anything else could be raised thereon. One writer states that he finds them more numerous on dry, rolling ground. Another that they damage crops more especially on wet lands. A corn field upon a newly turned sod is the metropolis of the cut worm, while corn upon clover stubble, oat stubble or wheat stubble are places where they love to congregate.

For the first half of the active life of many of the species, it is believed to be largely sustained by the food afforded in the roots of the various grasses. The fondness of the cut worm for corn, the most succulent of our grasses, has become proverbial. Rarely is a cornfield exempt from its presence. Wheat is often injured to the extent of a serious loss, as is the case with oats and barley. They also feed voraciously on the young plants of cabbage, turnips, onions, beans and clover. Young tobacco plants are often cut off in the month of June.

Cut worms have their years of unusual abundance. More than thirty cut worms have been found around one hill of cucumbers. In Sullivan county, Tenn., as many as sixty have been dug from a single hill of corn. Bushels are reported as having been taken from a large onion field. Dr. Harris says that sixty bushels of mold taken from a buckwheat field, contained twenty-three bushels of caterpillars.

Cut worms have many natural enemies. Foremost among the birds as a cut worm destroyer is the robin. A robin has been seen to capture from a lawn five cut worms in less than ten minutes, and five other birds were doing the same work. From the stomach of one robin were taken seven cut worms, 1½ inches long. The same food has been found in the stomach of the catbird and red-winged blackbird. Chickens are

very efficient destroyers of cut worms in gardens. A large orchardist has stated that he would not have been able to cope with the worms that attacked his birds without availing himself of the services of a large brood of chickens procured for this purpose. Some insects may also be mentioned among the natural enemies of the cut worm.

Among the methods of prevention and remedy, the following may be mentioned: Immediately after the corn is planted, sprinkle on the hill, over the covered grains, about one teaspoonful of common salt to each hill. Should the salt not be applied until after the corn has shown itself above the ground, it might kill the plants.

Put the seed corn in a tight tub or barrel and pour in enough water to keep it well covered after it swells. For each bushel of corn add a pound or pound and a half of coppers dissolved in hot water. Stir the corn well, and allow it to remain in the coppers water for twenty-four or thirty hours. Stir several times while soaking, then take it out and sprinkle a small quantity of land plaster over it.

An experiment with hellebore dissolved in water has proved entirely successful in protecting young tobacco plants from the worm.

A teaspoonful of kerosene oil to a pailful of sand has been recommended, to be renewed each week during the presence of the worms. A larger proportion of the oil might safely be used.

Planting more seed than is needed for maturity has frequently been found of service. When the larvae are not numerous, two or three stalks of corn or beans may suffice them to complete their growth.

A writer gives this method for protection from cut worms in a garden or patch: Prepare at leisure a quantity of small paper boxes, say from four to six inches square, without bottom or top, made to taper about half an inch. Place these around the plants, the widest part up so that the worms cannot crawl up their sides. Dipping the boxes in a strong solution of shellac will, with care, make them last for years.

An old method is that of making several holes, a few inches deep, about the hills with a tapering stick, to compress the earth at the sides, into which the worms would fall and out of which they would be unable to crawl. They could be killed by reinserting the stick or they may be left to die or to devour one another.

An instance is related where a cut-worm attack was forestalled by removing their food material from the ground. A piece of sod was turned over before the grass had made much growth. It was dragged to bring up the roots and dry them. A week later another dragging was given it, which destroyed every green thing. It was then planted with corn, and it entirely escaped the usual cut-worm attack.

The two preventives to be specially commended seem to be the salt and the copperas. A Maryland farmer says: "I tried the salt by selecting a piece of ground occupied for three years by a straw-rick, and upon which my cattle ran. I selected this plot as I had always found worms worse in such places. Immediately after planting the corn, I applied one tablespoonful of salt scattered over the hill. Not a hill was touched by cut-worms, but all around this plot, where salt was not applied, the worms cut two to three out of five hills, and I often found one to fifteen cut worms in a hill, but none where the salt was applied." Another experiment, with coppers, resulted in there not being a hill cut or a worm found where the coppers was used, while the entire field elsewhere cut from two to three hills out of five, with sometimes fifteen cut-worms in a hill.—*American Cultivator*.

Campbell Normal University.

In this institution, at Holton, this State, the methods of teaching are the most natural and modern, and the studies are pursued in their natural order. Thoroughness in preparatory work is required. Students can enter at any time during the term or year and can select their studies, if they are prepared to pursue them. The expenses in this institution are less than in many other similar schools. The education is practical—just what farmers' sons and daughters need to make them really useful men and women. This University has extra facilities for those who desire to pursue a musical course of study. Prof. Morrill, the director, is a graduate from Harvard's classical and musical departments, and for two years was a lecturer and instructor in the Boston Academy of Music. See advertisement in another column.

A man was hanged last week in Philadelphia. He had been imprisoned for some offence, and while so imprisoned killed his keeper. He was 29 years old. When 15, he cut a boy companion with a knife. That was his first offence. The police records show that he had stabbed seventeen persons and shot twenty-eight during the ten years before the murder. The crime for which he was incarcerated, when he killed keeper Doran, was committed in twenty-four hours after he had concluded a term of three years for stabbing a policeman and a special officer.

The Home Circle.

A Nature Prayer.

Oh, birds that sang such thankful psalms,
Rebuke human fretting,
Teach us your secret of content,
Your science of forgetting.
For every life must have its ills—
You, too, have times of sorrow—
Teach us, like you, to lay them by
And sing again to-morrow;
For gems of blackest jet may rest
Within a golden setting,
And he is wise who understands
The science of forgetting.

Oh, palms that bow before the gale
Until its peaceful ending,
Teach us your yielding, linked with strength,
Your graceful art of bending;
For every tree must meet the storm,
Each heart encounters sorrow;
Teach us, like you, to bow, that we
May stand erect to-morrow;
For there is strength in humble grace—
Its wise disciples shielding—
And he is strong who understands
The happy art of yielding.

Oh, brook which laughs all night, all day,
With voice of sweet seduction,
Teach us your art of laughing more
At every new obstruction;
For every life has eddies deep
And rapids fiercely dashing,
Sometimes through gloomy caverns forced,
Sometimes in sunlight flashing;
Yet there is wisdom in your way,
Your laughing ways and wimples;
Teach us your gospel built of smiles,
The secret of your dimples.

Oh, oaks that stand in forest ranks,
Tall, strong, erect and slightly,
Your branches arched in noblest grace,
Your leaflets laughing lightly;
Teach us your firm and quiet strength,
Your secrets of extraction
From slimy darkness in the soil
The grace of life and action;
For they are rich who understand
The secret of combining
The good deep hidden in the earth
With that where suns are shining.

Oh, myriad forms of earth and air,
Of lake and sea, and river,
Which make our landscapes glad and fair
To glorify the Giver;
Teach us to learn the lessons hid
In each familiar feature,
The mystery which so perfects
Each low or lofty creature;
For God is good, and life is sweet,
While suns are brightly shining
To glad the glooms and thus rebuke
Our follies of repining.

Each night is followed by its day,
Each storm by fairer weather,
While all the works of nature sing
Their psalms of joy together.
Then learn, O heart, their songs of hope;
Cease, soul, thy thankless sorrow;
For though the clouds be dark to-day,
The sun shall shine to-morrow;
Learn well, from bird, and tree, and rill,
The sins of dark resentment;
And know the greatest gift of God
Is faith and sweet contentment.

—Louisville Courier Journal.

Soul of me! floating and flitting and fond!
Thou and his body were housemates to-
gether;
Wilt thou be gone now, and whither?
Pallid, and naked and cold;
Not to laugh, nor be glad as of old.
—Edwin Arnold.

Miss Cleveland's Letter.

Miss Rose E. Cleveland, the President's sister, is an earnest, energetic woman, intensely interested in everything that helps the people along. When the agricultural professors were in session at Washington recently, she addressed a letter to them in the language following:

EXECUTIVE MANSION, WASHINGTON, July 8.—I venture to ask if the subject of silk culture in the United States is one which will receive attention from the Agricultural convention. I find myself feeling a deep interest in this industry, not only because it seems right and fitting that we should produce our own silk in successful competition with the old world, but because this industry when so established, as it may be encouraged by the government, will afford one more avenue of self-support to women. I am sure you desire with me to see such avenues increased in worthy and legitimate ways. I am hoping to have the pleasure of visiting your bureau before long.

Very truly yours,

ROSE ELIZABETH CLEVELAND.

The letter was received with applause and the following resolution adopted:

Resolved, That this convention has listened with pleasure to the sentiments expressed by Miss Rose Elizabeth Cleveland in her letter addressed to Commissioner Colman on the subject of silk culture in the United States; that we are in sympathy with those sentiments, and that Miss Cleveland is most cordially invited to honor this body with her presence and take part in its deliberations.

CITY-BRED OR COUNTRY-DEVELOPED.

At 9 o'clock the wagon should have been at the door and together with many others carried us into the woods.

Like all housekeepers, because I was to enjoy a day of idleness, I must precede it with hours of extra labor, therefore I arose at five to cook for our noon-day lunch.

Just as the oven full of good things got happily to baking the wind came suddenly sweeping over the prairie, banged the outside doors, and covered the reluctantly rising sun with clouds. Rain, cool, and most refreshing rain—if it had only known when to stop, for the accommodation of our picnic.

One by one the children came down stairs, flattened their little quivering noses against the windows and tried not to cry. To put heart in them, for whom a day in the woods is measured by its length in happiness, I said: "It will soon clear away and be the sweeter for the shower."

But cloud has succeeded cloud, notwithstanding the time-honored saw of our ancestors, "rain before seven, stop before 'leven." And at eleven, ten of the family are quite demoralized, while I, the mother of them all, whose duty it is to be as calm as a summer morning, feel that nothing can reestablish my serenity but a free use of the pen-point.

And, yet, it is neither the rain, the children's restlessness nor my own early rising that has overthrown my calmness; it is only words. The most empty things the world knows, made up from A, to &, of twenty-six letters. I can make them all in sixty seconds. They have been in us since the days of Eve, time enough, one would think, to have lost their sharpness.

Usually I will not allow the words of anybody to weigh me down or depress me, for I say to myself: "What are human beings that they should criticize, condemn, or extol my conduct, purpose, or results? That is only the right of a God! When a mortal so far forgets the frailties of the race to which he belongs as to assume the privileges of a God, and that, too, in the face of the caution, "Judge not that ye be not judged," they show a wilful weakness that places them beneath my consideration. Yet, when, as in the present case, words strike at a cause long established by facts, they are not so easily obliterated.

The words that have caused such a commotion in my mind are these, and to many persons who never gave the country a thought, excepting to laugh at its lack of tailors and milliners, they will be meaningless. "It is such a pity that Mr. Weston should take his family into the country away from all advantages." (It was there we were going to the picnic.)

To myself, whose one regret is the oft recurring thought that my boys are confined to the limits of city life, this sentence sounded like a parody on better purposes; and I looked quickly into the tall man's face to see if he was in earnest. He certainly was.

"Of what are they deprived by going into the country to live?" I wonderingly asked. "All of the advantages of the city," he pompously replied.

"Will you please specify?"

"Why, ahem," he began, like a self-asserting individual, who is not often asked a reason for his opinions, "churches!" Do let me stop long enough to tell you that he does not go into a church from years end to years end. "Schools,"—his boys of fourteen and sixteen have not been to school this winter. "Society, all of the refining influences, you know." It wouldn't be so hard on some families as it is on his, but Mr. Weston's boys are bright and smart, and his girls are stylish and handsome, and they ought to have opportunities for social development," he continued with growing self-complacency.

The words "social development" may cover a good deal of undesirable ground, I said, with a smile.

"Well, mental development, I suppose you would call it."

"That is better, certainly. But really, Mr. Alden, this is a very serious question from my standpoint, and I never walk along our crowded thoroughfares without thinking how much happier and more useful a score of well-dressed, yet almost impecunious—and altogether idle—young men would be if they were living on farms.

Nor can they be called mentally well developed simply because they have always lived amongst schools and churches. In their case the opportunity for improvement does not by any means imply that there has been an improvement."

"Well, as I look at it, if a man has got a nice family of young folks he ought to give them all the chances he can."

"That is the motive that carried Mr. Weston into the country to live." I laughingly replied.

"Well, some men have a queer way of executing good intentions," he replied skeptically.

"And others have a queer way of bringing the worst of results out of the best of intentions as you must admit if you look at some of the unpromising specimens of city-raised lads and lassies, with purposeless lives, and irritable tempers. Since Mr. Weston moved into that neighborhood they have built a new school house, with all the modern improvements, hire a teacher from the State Normal School, and Lucy Weston is assistant teacher, which certainly looks as though the children were in a fair way of receiving mental culture."

"Yes, what there is of them; but there are only fifty children in the district."

"Their pastor and Mr. Weston were school mates at Oberlin. The former was brought up in the country, and is fully in sympathy with his people, and is a gentleman of high mental and moral attainments; his presence alone would ensure neighborhood culture."

"There are only sixteen names on the church list."

"In the active leaven of this land those sixteen members may possibly exert more influence than do the city churches with their enrolled hundreds who continually receive members whom they promise to love, cherish and counsel," and whose names and faces they straightway forget. And fifty healthy, good-natured children, who expect to complete the tasks they commence, are better than a hundred who simply live, study and act for effect.

"If your country child begins to milk a cow, or churn the cream, or fodder the cattle, he must complete the task before restlessly turning to another. That is one of the great advantages of the country. Here, if a boy is cutting the grass in the yard and another boy comes along—as he is sure to do—there must be a friendly chat; the same way with hired help; they will stop at every pretext, until, finally, remembering a previous engagement, they will make up for lost time by carelessly cutting down the shrubbery altogether, or leave you to trim round it, and if you illy pay for an illy done job it does not finish the work or change the characteristics of the laborer.

"The difficulties are that the immediate results are not serious enough to make a child careful to finish the details, yet they are so perfectly good humored about it, and so thoroughly self-possessed, that it is difficult to make them understand the evil that is liable to follow such a beginning. As they grow older and come under pressure of emergency they show an ingenuity for shirking work equal to their lack of capacity for doing it. Such citizens are dangerous, they have neither fiber, nor firmness.

"Do not think me unpleasantly incisive," I continued, "about what you think a small matter. But is it a small matter, this aversion to farm life? or is it a small matter for us to moderate the real worth of our farming community?"

"And when one of our neighbors, as in the present case, takes his family onto a farm because he believes he increases their opportunities for growing health of body and uniform in character is it right for us to say that he has taken them away from all advantages?"

"Ignorance, oppression and want are the birth-right of the city, and they never soften human nature. Of social enjoyments, as you understand them, they must be largely deprived; though it is rare that a farming community has not its church and its school, its earnest, loving hearts, and its cultured minds. Of the circus, the dime museum, the Saturday matinee and the almost endless list, open to the city child, of these feverish pastimes the country child is deprived.

"I called upon a lady of your acquaintance last week. While asking after the health of her family her youngest child came tripping around the house, she impressed me with the brevity of her petti-

coats, and her premature expression. Putting her hand tenderly upon her head, her mother said: 'This is my baby, she has her hands full of care this morning as she is preparing for a large wedding party amongst her dolls; she has already made seventeen loaves of cake since breakfast.' Of course she referred to imaginary compounds. At school, at home, in the parlor or on the playground, mawkishly reflecting some one else. I cannot but believe that her country cousin, playing under venerable trees with acorn-cups and mosses and plainly dressed rag-dolls, whose only sound is the bird-song and the sheep-bells, lowing cattle and chirping squirrels and who drinks in, with lengthened gaze, the balm of the blue sky, the freshness of the sylvan leaves, is undergoing as healthy a process of development, and is quite as happy. More happy if indeed our happiest moments are those in which the memories are the most innocent."

"I am tempted to believe that Mr. Weston's dashing young girls and boys will be the better and possibly the wiser than the average of their town mates. As the years go by the boys cannot well grow up to be profligate sensualists, nor ambitious schemers, nor the girls be dependent for enjoyment upon the gratification of petty vanities. Their sources of pleasure will, at least, be generally pure; and they will be apt to have that independence of spirit which can stand firm without leaning upon other men's minds.

"They will not live largely upon scraps of begged opinion; for what one reads—and who doesn't read in this Cadmean madness—one will remodel to suit each his separate disposition, and so live up to his own ideal; but the individual peculiarities of our associates we simply reflect, and often do even that so poorly that it is no credit to either party. Those who genuinely and truly love the country and can make occupations for themselves out of the many that rural nature affords, have always at hand that advantage which natural beauty furnishes ever the artistic, where glitter those beauties which satisfy vanity and the craving for social distinction.

"I recently met such a good illustration of this that I must repeat it. I was beside a society girl just turned sweet sixteen who is a connoisseur in social art. She sat, listlessly, in her easy phaeton, behind a span of long-tailed, high-stepping ponies, and gazed with her accustomed expression of half scornful weariness, upon a farm house nestled in a valley at our feet. 'How can they endure it? I should rather not live at all than to live in such a lonesome spot,' she murmured meditatively. 'Who?' I queried—just to draw out the depth of her wisdom—which she considered so profound.

"Before she had time to reply, a young lassie of sweet sixteen galloped up. Her pony unaccustomed to meeting anything in that quiet spot, shied as she neared us, and gave us an opportunity to fall in love with her freshness. Her rosy cheeks, and brown skin, her merry soul-ful eyes, and mouth free from any smirk of art, all portrayed not only animal, but spiritual enjoyment. She sat her pony with a strong, easy grace that filled my young companion's eyes with envy. 'There is one of the inmates of that lonely little house and she looks as though she was alive and enjoyed being alive,' I said gleefully.

"I have since become intimately acquainted with her, and I have never yet met a town girl of her age whose mind was so full of beautiful thoughts, generous impulses, and general intelligence gleaned from good books, and whose one purpose in living seems always, like this isolated maiden's, to be to shed sunlight all around her. She seems unconscious of the feelings of envy, back-biting and the endless whitherings of Mrs. Grundy. Happy? Of course she is happy; and it is the advantages of the country that has made her happy.

"The lives of these two young maidens portray the length of the line measuring the distance between a city life with its anxious, combative temperament, and the healthfully ambitious, peaceful, rural life with its hours for retrospection. Both of my young friends are lovely and loveable; but it is easy to tell which possesses most strongly woman's most delicate charm and greatest beauty, which is and ever will be an independence of artificial stimulants for contest."

"Well," said Mr. Alden, rising, "I always did like to hear you talk." But it has stopped raining, and I am going down to telephone to the driver of express wagon No. 10 to be here at nine to-morrow morning and take us all up to Weston's. E. T. W.

The Young Folks.

Where Wild Strawberries Grow.

BY DART FAIRTHORNE.

Down a green lane where the buttercup gleams,
Bright as pure gold in June's ardent sunbeams,
Little ones come—while morn's blithe breeze blow—
Seek we the spot where wild strawberries grow.

Sweet as Hesperian garden can yield,
Comes the perfume from the red clover field;
Humming, the honey bee half-tipsy, go
Sipping the sweets where wild strawberries grow.

Close nestled down by the swift-flowing brook,
Here in the cosiest, sunniest nooks,
See the great berries like bright jewels glow;
Aye, ruby-bright, do wild strawberries grow.

Wild roses bloom on the green bank above;
Birds bubble over with rapture and love;
Tuneful and tender the rivulet's flow,
Ah! 'tis so sweet where wild strawberries grow.

Down on your knees in the daisy-starred grass;
Over the plants let your little hands pass;
Part them all gently, and now, look below,
See! where the luscious wild strawberries grow.

Fragrant and beautiful; do you suppose
Strawberry takes its bright tint from the rose?

Richest of colors are woven, I know,
In the bright places where wild strawberries grow.

Dew-drops at night, balmy breezes at morn,
Fragrance of clover and roses and thorn,
Nectar, which bee haunted flowers bestow,
All, you will find where the wild strawberries grow.

To fragrance and form and tint of a rose,
Added delight can the palate disclose;
Fruitage no fairer can earth ever show;
For, in perfection, wild strawberries grow.

—Western Rural.

Afloat With a Florida Sponger.

The sponge fishery of the Gulf of Mexico has its headquarters at Key West, though vessels are owned and sailed from many other points in the same State. The "sponging ground," as now known, extend at intervals from Appalachiola Bay around the whole peninsula of Florida as far as Bay Biscayne. These change from year to year in availability and productiveness, old localities constantly proving barren for a period, while new grounds are resorted to.

The fishing is carried on sometimes by individuals, each man in his own skiff near shore, as is the custom among the crowded reefs; but in the main it is pursued systematically by crews in sailing vessels, which go far from home. The craft employed, therefore, range all told from schooners of fifty tons to mere canoes. There are said to be in Key West about thirty-five good-sized "spongers" (for so the vessels, as well as men, are styled), besides an equal number of small boats, to which about forty sailing vessels outside the Key West are to be added.

Though designed for a pursuit that ordinarily will not take them out of sight of land for more than a few hours, and rarely engaged in any other duty, these vessels are built with great care and strength of materials, and many of them exhibit beautiful models. All crafts built at Key West have, and deserve to have, a high reputation both for speed and durability; but those made for this business are built even better than the average, and regardless of legitimate cost. Especial attention is paid to the strength of the rigging, since broad and lofty canvas is to be carried, and every rope, line, stick and bit of fastening must stand the test of an emergency.

When an owner of one of these schooners desires to send her on a trip, he first finds a skipper, or very likely he already has one, having sold a fraction of his interest to some capable sailor. On the other hand, captains, or ambitious seamen anxious to become skippers, are looking for vessels to command. When the right skipper has been obtained and put in charge, he becomes absolute master of the whole affair. The Key Westers are great sticklers for their privileges and dignity under that phrase, "put in charge." It is the Conck's opportunity, and he asserts himself in the exercise of his profession with consciousness of mastery. To him belongs the duty of thoroughly inspecting the vessel and in directing needed repairs and supplies for hull, rigging, or interior equipment. Next he must provision her for the length of cruise she is to take. All these things the owner has to pay for, but has no voice in selecting. A young skipper of my acquaintance threw up his commission because his owner presumed to suggest something as to the character of the food about to be bought. He was too valuable a man to lose, however, and was hired over again in five minutes, with the understanding well settled that he was to do as he thought best, so long as he was "in charge."

Having decided where he is to go, and how long the cruise is to last, and, having bought provisions on this basis, the skipper selects his crew, paying no wages, but offer-

ing a share or "lay" arrangement, which plan has been found the most satisfactory to all concerned. Including a captain, a crew consists of five, seven, nine, or, in rare cases, eleven men, the odd number being the cook. This functionary must also be a competent sailor. It is a contemptible thing therefore, to preside over the galley of a sponger, though naturally the berth is not liked by an active man. The size of the vessel of course determines the number of the crew; and for each two men one small yawl is carried. Each recruit furnishes himself his clothing (chiefly Cape Ann oil-skins), bedding and hook or hooks. These last are the tools by which the sponges are got up from the bottom, for in the Gulf of Mexico diving is not practiced, except in an individual way, which gives them practice enough to make the men of the Florida Reefs the best swimmers and divers in the United States.

The length of a cruise is from one to four months, depending on distance and other circumstances. Formerly the most distant, and perhaps the most frequented grounds were opposite the Anclate Keys, about thirty miles west of Cedar Keys; but in 1878 the sponges on that bottom were all killed by the so-called "poisoned water," which brought wide-spread destruction of every sort of marine life along these shores. This was a severe blow to the sponge fishery, and would have been irreparable, since the Southern grounds would hardly stand much additional working, had it not been for the immediate and subsequent discovery of sponges in great plenty at Rock Island, an insignificant reef south-east of St. Mark's Bay, and the most northerly and westerly point of sponge-fishing yet known. It is probable, that this was not previously thought to be productive ground, only because of no need to seek any new locality; and if necessity should arise for exploration, no doubt many additional and now unsuspected tracts, especially further off shore, would be developed. When the discovery of the Rock Island bars was first announced, every captain went there, as in the West the gold-diggers stampede to a new mine; yet the stock was so abundant that the uninterupted and feverish zeal of the whole fleet seemed not to make any impression on its plenteousness. Before many months had gone by, however, scarcity began to be noticed, and, in consequence, the spongers demanded higher prices than they had been willing to sell for when they could secure a ship-load in half the time it now took. When I say that there must have been nearly five hundred men working diligently at this limited spot alone, its rapid depletion will not appear surprising. Fortunately, however, fields of sponge-growth quickly revive under favorable circumstances (that is, when any number of young sponges and some old ones escape), so that a single year's rest makes it worth a sponger's while to go back and try again. Grounds closely cropped ought certainly to have a longer time to recover than this, however, if they are expected to hold out; but a better policy yet would be not to rake them so closely.

When the vessel has arrived at the fishing ground she reduces sail, until she is manageable by the cook alone, who, as I have said, must be a good man, not only in the galley but on deck—for to him is left the entire charge of the vessel all day while the crew is out. More than one cook has risen to be a skipper, and he shares equally with the crew in the results of the voyage. In fact, the captain himself has no more than one equal share; but in addition he gets a fee from the owners amounting to eight per cent. of the profits. He goes every day in the boats like one of the men, and there is no more—perhaps less—social distinction between skipper and crew than there exists in the Newfoundland fishing fleets.

The complement for each small boat, which is ready for immediate launching on the reef, consists of a "sculler," who propels the yawl by sculling with one ear over the stern, and the "hooker," who kneels in the prow and does the fishing. A large portion of the latter's success depends upon a skillful sculler, who can stop and hold the boat precisely at that point where his mate wishes to operate.

The words "hooker" and "hooking" are derived from the method pursued and the tool used throughout the Gulf of Mexico and Caribbean Sea for getting the sponges of those waters, which, of coarser texture, do not require the delicate handling necessary to preserve those that grow in the Mediterranean. This tool, called a "sponge-hook," is a very strong, well-curved, two-pronged grapnel of iron, made by a local blacksmith, and costing one dollar. I have seen a few with three prongs, and some years ago a flat, three-tined hook was in use; but this style was found to tear the sponges too much, and was abandoned in favor of the present form. It strikes me that a hook of the pattern now in service, but having narrow blades on the inside, so as to cut through the tough calcareous foot of the sponge, would be still better. The poles are from twenty to thirty-eight feet in length and about three inches in circumference; they are made of the best yellow pine, and cost at the rate of four or five cents a foot. Heavier poles than this, however, are used in deep water, since they are so much easier to direct, and to keep down to the bottom, than the light and slender ones that answer well for shallow places; and, as the general rule holds good that the deeper the water the better the sponge, every man wants to fish at as great a depth as practicable.

The water of the Gulf of Mexico is noted for its clearness; but at best our unaided

eyes cannot with any distinctness see objects further than six or eight feet below the surface. The time-honored device of the water telescope is employed. Hyatt, in his account of the commercial sponges, describes this as a tube several feet long, similar to that used in Norway; but the only form I have ever seen in Florida, and which is known as a water-glass, consists simply of an ordinary wooden pail, into the bottom of which has been set a pane of strong glass. Sinking the lower half of this bucket below the water, and pushing his face down into it while the bucket is shoved over his head to hold the bucket in place, the hooker shuts out the reflection of the light from the surface of the water, and can look down into the more or less crystal depths as far as the light penetrates. In this posture, bent over the rail of the canted yawl, to the pain, and often permanent injury, of his abdomen, his great pole resting across the gunwales in readiness, and his head half concealed in the swimming water-glass, the sponge-hooker is slowly moved over the waves by his intelligent sculler, while he scrutinizes the bottom for the inconspicuous objects of his search.

(Concluded next week.)

Life in Guatemala.

The people of Guatemala have a peculiar way of preparing their coffee for the table. Every week or so a quantity of the berry is ground and roasted, and hot water poured slowly upon it. The black liquid which drips through is permitted to cool, when it is placed in a bottle and set upon the table like vinegar or Worcestershire sauce. Pots of hot water and milk are furnished, with which the coffee drinker may dilute the cold black syrup to such a weakness as he likes. This plan has its advantages, but it takes a long time to become accustomed to it.

Although the hotels are clean and have better beds and food than we have found elsewhere in Spanish America, there is one peculiarity which is decidedly objectionable. The bill of fare is never changed. One gets the same dinner and the same breakfast every day. There is enough and a variety at both tables, but there is always the same amount and the same variety. First at breakfast there is always soup; then an omelette, or eggs cooked as you want them; next comes cold beef or mutton, left from the previous day; then beefsteak, usually with onions; then beans and fritters. For dinner soup is first served; second, rice with turkey or chicken; then roast beef, salad, fruit and cheese in order. All the native food, beef, fowls, fruit and vegetables, is cheap, but flour and other imported products are very expensive. The hotel keepers are usually Frenchmen or Germans. You seldom find a native keeping a hotel; but, if you do, avoid it.

The laundry work of the city is never done at home, but always at the public fountains, which are scattered over the city and have basins of stone arranged for the purpose. The wet clothes are placed in a basket and carried home on the head of the laundress to be dried. Every morning and evening, Sundays included, there is a long procession of washerwomen going to and from their fountains with enormous baskets of soiled or wet garments upon their heads.

THE GUATEMALAN SABBATH.

Sunday is observed in Guatemala more than in any other Spanish American city we have visited. Usually, in all these countries Sunday is the great market day of the week, when all the denizens of the country dress in their best suits to come to town to trade and have a little recreation; but in Guatemala there is a law, which is respected and generally enforced, requiring the market and all other places of business to remain closed on the Sabbath. Sometimes a cigar shop or a saloon will be found open, and the hotels, bar-rooms or "cantines," as they are called, do more business than any other day, but there is no more general business done here on Sunday than in the cities of the United States.

Another peculiarity is that all the stores sell what is known in the slang of trade as general merchandise; that is, they keep all sorts of goods. You buy your canned fruit or sardines where you get your shoes or hat, and can fill an order for every variety of edibles or apparel in the same establishment. An exception should be made of drugs, for the apothecary shops are usually kept by the physicians, who compound their own prescriptions, and the drug stores in Guatemala, as in every other city of Central and South America, are usually fine establishments.

When you send for a "doctor" a lawyer comes. If you are sick, always ask for an apothecary or a physician. When you see a man alluded to as *Senor Dr. Don So-and-So*, you may know that he is an attorney of distinction. The notaries draw all legal documents, as in Europe. Nobody ever asks a lawyer to draw a contract or a will.

The photographers of Central and South America are almost invariably American, and there is usually one in every town of importance. The people are vain of their personal appearance, hence photography is a lucrative business. But customs differ. In Venezuela or Havana, if a gentleman possesses the photograph of a lady he is either a near relative or is engaged to marry her, otherwise her brother or father has good cause to thrash him or challenge him to fight a duel. If the photographer sold the picture or gave it away, he is liable to be punished by fine and imprisonment.

In Guatemala, on the other hand, the pictures of the belles of the city, whether

married or maidens, can be purchased by any one who wants them at the photographer's and often at the shops, and the rank and popularity of the subject are usually estimated by the number of her portraits so disposed of.

A CODFISH ARISTOCRACY.

Codfish is a luxury. It is served at fashionable dinners in the form of a stew, or patties, or a salad, and is considered a rare and dainty dish. They call it "bacal a," and the shop windows contain handsomely illuminated signs announcing that it is 'c sale within. It costs about forty cents a pound and is, therefore, used exclusively by the aristocracy.

The railroads in Guatemala are run on the credit system. Freight charges are seldom paid upon the delivery of the goods, but merchants and others expect three or four months, and sometimes more time. If a package arrives with your address upon it the railroad company is expected to deliver it at your residence, unless it happens to be very bulky, and a few weeks after a collector comes around for the freight money.

The cars came into Guatemala for the first time last August, and have not yet ceased to be a novelty. There is always a large crowd of spectators at the station upon the arrival and departure of trains, and among them are the best people of the place. Twice a week at train time the National band plays in the plaza fronting the station, to entertain the people who are waiting.

The Government owns the telegraph lines and charges very low tariffs, the cost being twenty-five cents for a message to any part of the Republic; but the cable rates are very high, being \$1.15 per word to the United States and \$1.50 per word to Europe.

SANCTIMONIOUS NOMENCLATURE.

The literary people here always spell general with a "J." Barrios was the "General Presedente." When a letter is addressed to a person of distinction the envelope reads, "Exmo y Illustra Senor Don John Smith"—the most excellent, or His Excellency, the illustrious Senor Don, etc. One is apt to feel very highly complimented when he gets a letter bearing this inscription.

Everybody is named after some saint, usually that whose anniversary is nearest the hour of their birth, and the saint is expected to look after them. When a man comes here who doesn't happen to be christened after a saint the ignorant people express their surprise, and ask, "Who takes care of him? Who preserves him from evil?"

As a rule, the people are honest. The natives always ask three or four times the value of the goods they have for sale, as they expect you to beat them down; and, after wringing their hands and protesting by all the saints that the article cost more than they ask, they will finally sell it at half that price. The market formerly occupied a confiscated church, but Catholics would not sell goods there. They frankly explained that they could not lie well in a sacred place.

Burdeit's Description of a Cyclone.

Blow gently, winds, across the prairie's brow,
Across the dimpling fields of springing grain,
Breathe softly o'er the billowy emerald plain,
Sigh tenderly, great Kingishe's breathin' now!

An old ripsnorter from Snorterville,
With a big red barn from Smedley's hill;
An' a quarter section of bottom land,
Just for ballast you understand;
An' a two-hoss team an' a walnut tree,
An' a smoke-house, mixed in a grand me-lee.
An' a big red cow, an' a yoke of steers,
An' lightin' enough for a hundred years;
An' whistle, an' shriek, an' thunder, an' roar,

A hundred miles a minute or more;
I'd give my farm for to be a mole
Just while I could dig a cyclone hole.

—Brooklyn Eagle.

Who loves not more the night of June
Than cold December's gloomy moon.

—Sir Walter Scott.

The self-same sun that shines upon his court,
Hides not his visage from our cottage, but
Looks on both alike.

—Shakespeare.

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Published Every Wednesday, by the
KANSAS FARMER CO.

E. C. DEMOTTE, President
E. B. BROWN, Treasurer and Business Manager.
H. A. HEATH, General Business Agent.
W. A. PEFER, Editor.

TERMS: CASH IN ADVANCE.

Single Subscriptions:
One copy, one year, \$1.50
One copy, six months, 1.00

Club Rates:
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Eleven copies, one year, 10.00

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Some cases of genuine pleuro-pneumonia in cattle were found Monday near Winchester, Va.

An effort is being made to have covers erected to protect live stock landed on the docks at Liverpool.

Ten of a lot of twenty-eight head of cattle were killed by lightning a few days ago near Stillwater, Mich.

The number of live stock received at Liverpool, England, in the first six months of this year was 45,888 steers, 14 calves and 2,133 sheep.

Six persons, members of two farmers' families, were drowned in Walnut river a few days ago. They were going plumbing and did not know that the river was higher than usual.

Six children were burned to death in a log house, a few days ago, near Pittsburg, Pa. The children were sleeping upstairs, and the fire, when it was discovered, was too far under way to save them.

The **FARMER** is in receipt of an invitation to visit the fair of the Kentucky Agricultural and Mechanical Association to be held at Lexington, commencing August 25th, and continuing five days.

The government of Belgium has invited the President of the United States to send a delegation to an international congress of botany and horticulture which is to be held at Antwerp next month.

About the Web Worm.

This interesting little ruffian has caused a good deal of excitement recently, hence any information or suggestion concerning it is received anxiously. We have seen and read a good many statements and opinions on the subject since the worm's appearance in the corn-fields of southern Kansas this year, but the most satisfactory article that has come under our observation is one prepared by Prof. F. H. Snow, of the State University, and printed in the last monthly report of the State Board of Agriculture. Prof. Snow is well qualified for this kind of work; he takes much interest in entomology as a general subject, and more particularly as it relates to interests of Kansas people. And he is as careful and prudent about his statement of facts as he is industrious and studious in obtaining them. What he says, therefore, may be received as authority at date of publication.

The web worm was reported in thirty-five counties of this State, and the damage done by it was considerable in at least twenty; still, the injury has been repaired in nearly if not quite every case, so that it is not believed anywhere that the work of the worm will be appreciable in the aggregate crop of the year. Prof. Snow estimates the extent of injury in the counties most hurt at not to exceed 10 per cent. of the entire crop. The twenty counties reporting heaviest losses are: Allen, Bourbon, Chautauqua, Cherokee, Coffee, Cowley, Crawford, Elk, Greenwood, Harper, Harvey, Labette, McPherson, Montgomery, Neosho, Reno, Sedgwick, Sumner, Wilson and Woodson. The fifteen counties only slightly injured are: Anderson, Barber, Butler, Chase, Ellis, Finney, Ford, Lyon, Marion, Pawnee, Pratt, Rice, Saline, Stafford and Wyandotte. It will be seen that the visitation was confined mostly to the southeastern quarter of the State. A few of the central counties were visited by the same worm in 1880, doing what mischief they did in about two weeks, then disappearing and not returning until this year. It is claimed by some that this web worm is the same that in Texas is known as the cotton worm, but we doubt the correctness of the claim, though, in addition to a seeming likeness, the worm attacks weeds as well as more useful plants. Its work was done this year on other plants as well as corn. Gardens were badly cut up in some places. The worm attacked corn, potatoes, millet, flax, cotton, tobacco, sugar cane, castor beans, clover, timothy, cabbage, peas, beets, lettuce, melons, cucumbers, onions, and anything else they found in gardens.

The worms ceased their destructive work about the 1st of July—within a week of that time, and soon afterwards their moths appeared in adjoining grass and weeds, preparing to deposit eggs for another brood. The new moths have appeared in some places and have been reported. They are of a light yellowish-brown color and measuring about an inch from "tip to tip of outstretched wings." Prof. Snow says it belongs to the same family with the leaf crumpler, the melon moth and the meal moth. "The larva itself, which does the mischief, is a slender, light green, black dotted worm or caterpillar, about seven-eighths of an inch long, having a quick, jerky mode of locomotion when disturbed, and spinning a web over the leaves of the plants upon which it feeds." Prof. Snow is of opinion that "this insect is a native of Kansas and may be found every year in its various stages." He says its natural food consists of certain wild plants and weeds, especially the different species of amarantus or pigweeds, lambsquarter and

purslane, and he believes that its attack upon cultivated plants is chiefly because of a shortage of its own regular and natural food.

As to remedies, which, after all, is the great thing, Prof. Snow recommends in part what was suggested in these columns the first issue after the earliest report of the worm's presence. He based his recommendations largely upon suggestions of correspondents that had experience. London purple, mixed with water in the proportion of one pound of the purple to one hundred gallons of water is a good remedial agent. The mixture may be applied in any way that will get it to the worms, as a sprinkler, a spraying implement, as a force pump and spray nozzle, or a wisp. London purple comes in barrels and may be purchased at about nine cents a pound. In cases where much effort is required, a tank may be made to contain the mixture, and it may thus be hauled about on a wagon. Mr. Wellhouse, a prominent horticulturist of Leavenworth county, used such a tank in a war against canker worms in his orchard. He used a rotary pump manufactured by the Gould Manufacturing Company, at Seneca, N. Y.

Paris green is good, also, in the proportion of a tablespoonful to half a gallon of hot water. It may be applied as described above for London purple.

In gardens attacked by the web worm, if chickens are turned in they will destroy a great many. Prof. Popenoe, of the Agricultural college, says that some gardens he visited "enjoyed almost entire immunity from this pest" when chickens were given opportunity to take a hand in the fight.

It is believed by persons most competent to judge that the early planting of corn in early seasons will insure immunity from the web worm. This remedy, of course, can be applied only in early seasons. Such a year as this, it is not an easy thing to get an early stand of corn. The winter continued so long, and the temperature of the spring months was so low, and there was so much rain, that many farmers could not plant corn as early as usual, and especially in low and flat land, and where the soil was very clayey. Still, there were a great many fields planted early, and the corn on them is now in tassel and much of it is earing, and the later plantings and replantings are all coming on rapidly.

The **FARMER** renews its suggestion of a few weeks ago, that farmers should supply themselves early every year with a quantity of London purple or Paris green, whichever may be preferred, in order to have it ready in case of need. The worms come suddenly, and they work fast. There is little time to prepare after the work of destruction has begun. By attending to the preparatory labor in the winter, there is no time lost when the worms appear. In an hour war may be begun, and a crop may be saved.

In an official circular from the Adjutant General of the army, at Washington, it is stated that an attorney of Washington named J. Ambler Smith, is suspended from further practice in the bureau of the War Department because of the following being printed on his business cards: "Desertion mark quietly removed."

Dr. D. E. Salmon, Chief of Bureau of Animal Industry, Washington, D. C., writes to Dr. M. R. Trumbower, the Government Veterinary Inspector located at Kansas City, that no fees are allowed to United States Veterinary Inspectors, and requests that he refund the amounts charged for issuing certificates of health.

Kansas Corn Doing Well.

Last week this paper contained the following paragraph on the corn outlook:

Our information is that the early corn, where it was not attacked by insects or injured by rains, is very good, much of it beginning to ear; that the damage from insects was not nearly as much as was expected at one time, and that damage has been repaired; that the last planting in all cases is doing well; that generally speaking, the State over, the outlook for corn is very good, fully as good as in any former year. It has been and still is our belief that the corn crop this year will be as good as we ever had. We have taken pains to collect reliable information from persons who have seen the fields, and they say that Kansas corn is in excellent condition.

A reporter of the *Daily Capital*, of this city, called the attention of Major Sims, of the State Board of Agriculture, to the **FARMER**'s corn statement, and asked his opinion of it, and this is what followed:

"Yes," said the Major, "I am convinced that the corn crop this year is going to be much better than we at first anticipated. I have recently been out on the Santa Fe railroad and took particular notice of the condition of corn, and was pleased to find that for the most part the corn was fine. Of course there has been considerable damage done by heavy rains; in those places we find that corn is damaged; but where there has been dry weather there is good corn to be found. I find that this is pretty much the case all over the State."

When asked how he thought this year's crop would compare with that of 1884, he said he believed that it would fully equal it. Mr. Sims, in his report for the month of June said that there would probably be a shortage of over 21,000,000 bushels as compared with last year's crop. He said yesterday that he was satisfied his next report would make a much better showing. "However," said Mr. Sims, "it must be taken into consideration that there will probably be an area of nearly 5,000,000 acres, which you know is an increase of about 400,000 acres over 1884. The product of corn last year was 190,000,000 bushels, and probably it will reach the same magnificent amount this year."

The *Capital* has taken the pains to interview parties from all parts of the State, and in every case the information given has been to the effect that Kansas is going to have her usual large crop of corn. In almost all parts of the State the crop is in the very best of condition and promises a fine yield. The State need have no fears as to the corn crop.

The National Cattle Growers' Association has called a convention of cattlemen to meet at Chicago, Ill., November 17 and 18 next. It is to be composed of delegates appointed by the cattle growers, breeders and dairymen's associations, State boards of agriculture, agricultural colleges and the agricultural press of all parts of the United States, Great Britain and the Canadas, and also of delegates at large, appointed specially by the Governors to represent the cattle interests of the several States and Territories.

We are in receipt of the catalogue of Chaddock college, Quincy, Ill., under direct supervision of Prof. H. C. Demotte, who, as our readers know, is President of the **KANSAS FARMER** Company. If any of our readers desire to take a college course in science, literature, law, medicine or divinity, and wish to go outside of the State to do it, we have no doubt they would do as well at Chaddock as anywhere in the country.

Foreign immigration has fallen off nearly fifty thousand this year.

Cholera still destroys people in Spain. The daily reports show an average of about thirteen hundred new cases and six hundred deaths. That is equal to more than four thousand deaths in a week. The deaths equal nearly one-half the cases. This is almost depopulation.

Weather was very warm here and elsewhere the last six or seven days. Eight deaths occurred from heat in one county in New Jersey the 17th. In New York city, the same day, many persons were prostrated and several street-car horses died from the effects of the heat. But it is good for corn.

There are some indications of renewed trouble between Russia and England. It seems that the Russian army is gradually making its way toward the city of Herat, in the north part of Afghanistan, and the key to India. In case the report is true and in case the Ameer of Afghanistan should request assistance from England, war will be almost inevitable.

The Kansas Bureau of Labor Statistics is getting well established. Mr. Betton, the Commissioner, has just returned from a visit East to examine systems in other States that have similar bureaus, and he now feels much better prepared to continue his work satisfactorily than he was in the beginning. He will commence soon to collect statistics of labor in Kansas.

Great commotion was produced in London, England, recently, by certain publications in the *Pall Mall Gazette*, showing scandalous debauchery in high life in that city. Boys that carried and sold the paper were imprisoned a few days and threats of prosecution were made against the paper; but the editor challenged investigation; the boys were released and little is now said about it.

At a recent examination of ten young ladies who had passed through college, their standing in Greek was 100, in Latin 95, in English 53. That is about the way when people neglect essentials and take up that which is, in most cases, purely ornamental. Nowadays, this kind of ornamentation is so thin that it is easily seen through. Better take care of things at home first before going abroad.

The State Temperance Union has called the annual meeting this year at Topeka, October 13 and 14. The Secretary says "full detailed information will be given hereafter. This early announcement is made to give those who are interested in the cause ample time to arrange to be present. Churches, Sunday schools, organizations and individuals are urged to note the date and to make no arrangement that will prevent a large attendance. It is hoped and confidently expected that this will be the largest temperance convention ever held in the State."

The Indian scare has wholly subsided. What and how great the danger of an Indian uprising in the Territory was, we do not know; but by the prompt action of Governor Martin and the authorities at Washington, the border people now feel secure. The actual danger, we suppose, was not great at any time, but the atrocities of Indians are so horrible that a very big excitement may soon grow from a mere rumor. There are no wild Indians in Kansas, nor within fifty miles of our borders; the nearest are in the Territory south, and no persons in Kansas feel any uneasiness even during a scare, except the people living near the line and immediately north of the reservations in Indian Territory. At Topeka, for example, the people feel as secure and safe, so far as Indians are concerned, as do the people of Boston or New York.

From the Indians.

Latest reports from General Sheridan, who is among the Cheyennes and Arapahoes, are to the effect that he has had a private conference with the dissatisfied Cheyennes. They assured General Sheridan that they were glad to see him, so illustrious a visitor direct from Washington, and that the talk about the Cheyennes wanting to fight was all a lie. On the contrary, they were now and always had been entirely peaceable, that they had some causes of complaint, that they did not like their agent and that they were opposed to the grass leases, and on this account they would like a large portion of the reservation set off separately for their own use so they could have their own agent and lease their grass to their own friends.

The Arapahoe Chief, Powderface, was present and made a speech, in which he told General Sheridan that for many years his people had never fought the whites and that he (Sheridan) well knew that the Arapahoes had refused to join the Cheyennes in their last war, and that in the present trouble the Arapahoes had remained by the side of the whites; that thus having been friendly for so many years he thought the Arapahoes' statements should have as much weight as the turbulent Cheyennes present, who were always making trouble; that the Cheyennes who talked against the grass leases were only a very small number of the tribe, and that a large majority of the Cheyennes and all the Arapahoes were strongly in favor of the grass leases; that the money had been promptly paid them for the use of that which would otherwise have rotted or been burned up; that the lease men had always acted honorably and kept their promises, and that he (Powderface) wanted the Government to distinctly understand that with the exception of the few who had talked with the Indians wished the grass leases to run for the full term (ten years) for which they had been made.

Such is the report. How much truth it contains, we do not know.

Substitute for Peaches.

The tenderness of peach trees has set many a farmer and horticulturist to thinking about how to get a substitute that would go through the winter all right. In this line of thought the following, which we clip from the *Herald-Tribune*, Lawrence, is in order. The *H.-T.* says: "Mr. A. C. Griesa, of the firm of A. C. Griesa & Bro., proprietors of Mount Hope Nursery, has shown us samples of the Russian apricot, a new variety of fruit introduced into this country a few years ago by the Mennonites. This fruit is delicious in flavor and is destined to be the Kansas and Iowa substitute for the peach, as it will bring its fruit buds through the winter unharmed when the mercury is 30 deg. below zero. Mr. Griesa is enthusiastic over its possibilities. In this part of Kansas we have not had a peach crop for several years, the winters of late having proven too severe for the trees; but the Russian apricot delights in a zero temperature, and will always blossom and fruit after an arctic winter, hence its great value to the Kansas fruit-raiser. Mr. Griesa's Russian apricots bear at four years from the seed. It is also a prolific bearer, and is free from insect pests as yet, but, doubtless, in the years to come, there will be a bug or a worm invented that will smite it hip and flank. Every farmer and fruit-grower should plant an orchard of this valuable addition to the known fruits that it will pay to cultivate in Kansas."

Our Mr. Heath has an enormous appetite; he can't help it—he's a newspaper man. He was down at Mr. Watt's

fruit farm recently, and after resting a while he went off this way: "When the writer ceases to think, then—and not till then—will the mouth cease to water whenever he thinks of that early morning ride to the model small fruit farm of D. G. Watt, Lawrence, where the writer feasted upon the fresh, ripe, luscious strawberries of the improved varieties, accompanied with pure rich cream. It is a constant wonder that every farmer does not grow at least a small patch of strawberries for home use."

Late Patents on Farm Machinery.

List of patents granted to citizens of Kansas for agricultural machines, implements, etc., for the week ending Tuesday, July 14, 1885, compiled from the official records of the United States Patent office, expressly for the *KANSAS FARMER*, by Herring & Redmond, solicitors of patents, No. 637 F street N. W., Washington, D. C., of whom information may be had:

No. 321,964.—Carrie G. Griffin, Manhattan, combined door check and buffer.
No. 322,184.—John A. Jonas, Reserve, wagon-box fastener.
No. 321,999.—Clawson Parker, Cowland, animal stock.
No. 322,319.—B. K. Reed and B. L. Burris, Wichita, excavator.
No. 322,133.—Jacob Sloop, Canton, spike extractor.
No. 322,077.—D. R. Stiles, Ottawa, regulator for steam pumps.
No. 322,027.—J. S. Warren, Burlingame, rail joint.
No. 322,222.—G. D. Waters, Cedarville, clamp for eaves-trough.

Inquiries Answered.

INSECTS.—Insects may be destroyed in different ways. London purple and Paris green are both good when insects are in the larval stage, that is, when they are caterpillars and worms. The reader will find useful suggestions about the use of these substances in our article on the web worm in this issue. But every one that has trees and vines should spend as much time as possible among them, destroying insects in any way most convenient. Kill wherever you can.

BLIGHT.—This term is used very much like cholera. It is made to do duty in many cases where one does not know what other word to use. But generally, when the bark of a young tree turns black, it is said to be affected with blight. The cause is not always the same. We have known it to appear in very warm and dry weather. The south side of young apple and pear trees would blacken and appear dead. The best way to prevent this is to plant healthy, well-rooted trees in good-conditioned ground, cultivate well, mulch at least two and a half feet about the tree, then wrap the trunk with paper, securely, though not tightly, held in place. Most disorders of this kind in trees come from deficient drainage, deficient cultivation, faulty preparation of the soil before planting, unhealthy stock, too heavy tops, want of care, insect depredations, etc.

PROUD FLESH.—I have a half-blood Norman colt that was cut on the leg just above the pastern joint. There has been a puff of proud flesh half as large as a man's fist for five months. I have used blue vitriol and burnt alum on it for some time, but does not seem to do much good. Will you please give me a remedy?

—Proud flesh is removed by the use of pulverized burnt alum. Brown sugar is good, also. The difficulty in your case, probably, is that you do not know how to use the remedy. It may be that the lump is so large that it is only partially reached by the application. It may need heroic treatment to get rid of most of it at once, in which case it must be cut away or opened up so that alum or sugar will get in deep enough, and act on surface enough to destroy the proud flesh faster than it is formed. Careful feeding, also, is necessary. Nothing could be better than grass, with a little oats once a day. We advise you to consult your family physician, if there is no responsible veterinary surgeon.

The increase in valuation of the property of the State as shown by the assessors' returns is \$11,223,536 over last year. The valuation in 1884, as fixed by the State Board of Equalization, was \$236,048,108.80; for 1885, it is \$247,271,645.40.

Reports from the cattle-growing regions are favorable. In Colorado, the range is in good condition, and cattle are fattening rapidly. General rains have prevailed and all cattlemen are jubilant over the prospects for a good year. A great many native and wintered Texas cattle are leaving for the Northwest Territories and all movements of cattle are being made in compliance with the law and without molestation. No fever has yet developed in any herd in this section. Cattle are healthy in New Mexico. The report from Idaho says that while little rain has fallen there lately the grass is fine and cattle are doing splendidly. There is no disease among them and cattlemen are very much encouraged by the outlook for the present season. Large numbers of stock cattle are being shipped from western Idaho and Nevada to Wyoming. Nevada reports a better condition of both the range and the cattle than for several years, and though the hay crops on the river bottoms are lighter than usual, quality will be better and a greater number of cattlemen will put up hay for winter feeding than ever before. In Kansas stock never was in better condition.

THE MARKETS.

By Telegraph, July 20, 1885.

STOCK MARKETS.

New York.

BEEVES—Receipts 190 cars. Firm and fairly active. Native steers 4 95a6 44, fat bulls and dry cows 3 80a4 80.
SHEEP—Receipts 11,750. Dull and depressed. 3 50a4 50 for sheep and 4 50a6 50 for lambs.
HOGS—Receipts 10,000. Nominally steady at 4 60a5 10.

Chicago.

The Drovers' Journal reports:
CATTLE—Receipts 1,200, shipments 2,000. Market firm for best, 10c off for common. Shipping steers 5 50a6 05, stockers and feeders 2 75a4 40, through Texas cattle 4 00a4 20.
HOGS—Receipts 25,000, shipments 5,000. Market steady, close 1 firm. Rough and mixed 4 00a 4 30, packing and shipping 4 25a4 50.
SHEEP—Receipts 1,200, shipments 200. Market steady. Natives 3 75a4 30.

Kansas City.

CATTLE—Receipts 1,284. Exporters 5 30a5 50, good to choice shipping 5 00a5 25, common to medium 4 50a4 90, stockers and feeders 3 30a4 30.
HOGS—Receipts 10,198. Market for light weights 5c lower, heavy and mixed weak. Assorted light 4 15a4 30, heavy and mixed 3 90a4 10.
SHEEP—Receipts 65. Market quiet. Fair to good muttons 2 40a3 00, common to medium 1 60a 2 30.

PRODUCE MARKETS.

New York.

WHEAT—Receipts 64,240 bus., exports 112,988. No. 2 red, 1 01½ elevator, 1 08 5 16 afloat; No. 2 red July, nominal, 1 01½; Aug 1 01½a1 02½, Sept 1 03½a1 04½.
CORN—Opened a shade better, later declined, and closed steady. Receipts 208,510 bus., exports 127,329. No. 2, July 51½a52¼c, Aug 52a52¼c, Sept 52½a53¼c.

Chicago.

WHEAT—Somewhat unsettled and nervous, and frequent fluctuations in prices were noticeable. Advices from European markets showed a comparatively steady feeling in that quarter, and the Eastern markets were stronger in a general way. Saturday sales ranged: Cash 89½a89¾c, August 90½a91¼c, September 92½a93¼c, No. 2 red 95a96c, No. 3 red 90c.
CORN—Market quiet and prices closed about 5c lower than Saturday. No. 2 46c, cash 45½a 46½c, July 45½a46½c, August 45½a46½c.
OATS—Market opened firm, but subsequently declined ¼a½c; closed quiet. No. 2 31½a31¾c, cash 31½a31¾c.
RYE—Moderate demand and market steady. No. 2 at 58½c.

BARLEY—Nominal.
FLAXSEED—Steady; No. 1, 1 24.

St. Louis.

WHEAT—No. 2 red, cash 1 03a1 04½, August 1 02½a1 03½, Sept 1 (3) 1 04½, Oct 1 05½a1 06½, No. 3 red cash 98c.
CORN—Dull and irregular. No. 2 mixed, cash 44½a44¾c.
OATS—Dull and easy. No. 2 mixed, cash 32½, bid Aug 24½c.
RYE—Dull; sellers at 56c.

Kansas City.

WHEAT—Receipts 490 bus., shipments 6,942 bus., in store 659,360 bus. Market is steady. No. 2 red cash sales 81c bid, August sales 82½a82¾c, September sales 85½c, cash sales 93c; No. 3 red, 72c bid 72½c asked; No. 3 soft, 88c bid 80c asked.
CORN—Receipts 11,629 bus., shipments 6,540 bus., in store 172,404 bus. Market quiet. No. 2 cash; 35c bid.
RYE—No. 2 cash, 44½c bid.
OATS—No. 2 cash, 22c bid.
FLAXSEED—1 10a1 12.
BUTTER—In lighter demand; receipts steady. Quotations: Creamery 16c, good 12½a13c, fine dairy 10c, Young America 11c, roll 10a17c, store-packed 8a10c.
EGGS—Market weak at 7c per dozen.
CHEESE—We quote. Full cream 11c, part skim flats 6a7c, Young America 11c.
SORGHUM—0c per gallon.
BROOM CORN—We quote: Hurl 3a4c, self-working 2a3c, common 1a1½c, crooked ¾a1½c.
POTATOES—New, home grown, 40c per bus.

In the Dairy.

The Winter Feeding of the Dairy Cow.

Mr. Gilbert Murray, of Elvaston, Scotland, delivered an address recently at a Dairy association meeting, from which we extract the following:

This subject opens up a wide and important field of inquiry, involving not only the feeding, but the housing and sanitary arrangements of the shippon and homestead. The continuous drain on the system of an animal in full milk renders her particularly susceptible to atmospheric changes; exposure and sudden chills impede the flow and deteriorate the quality of the milk, hence it is obvious that the sheds or shippons should be kept at a uniform temperature of not less than 55 deg. Dairy cows require exercise, but not exposure to the weather; they should be turned daily to water in an enclosed yard—if covered in, so much the better. Not more than six should be turned out together at one time, otherwise they are apt to gore and injure each other. The health of a milking cow is of the first importance. To begin with she should have at least 600 cubic feet of breathing space; there should be a free admission of air, without the possibility of draughts; the atmosphere—i. e., air—should be admitted close to the floor line, and a thorough system of top ventilation provided. The sheds should be kept scrupulously clean; the inside walls must be limewashed twice a year.

Wherever winter dairying is carried out to any extent, an unfailing and liberal supply of water should be available, not only for drinking purposes, but also for flushing out the grips and passages, which should be attended to daily. Underground drains are inadmissible. In a well-managed and well-concreted cow-shed, all inside drains should be on the surface, emptying into a cistern or cesspool outside. These channels are formed of blue brick specially moulded; the general dimensions are twelve inches wide by four inches thick, having a quadrangular central channel six inches wide at top and two and a half inches deep in the center. The grips are made of the same material on a larger scale; the blocks are two feet wide; the central channel eighteen inches wide by two and a half inches deep; the heel-stones are laid of blue brick headers, and the beds formed of hydraulic lime concrete, having a slight dip to the grip. Here you have a perfect system of sanitary arrangements entirely under the control of the manager, and capable of being carried out at the least possible cost. There is an adage that "where there's muck there's money;" unfortunately we frequently find it is in the wrong place. The great importance of strictly attending to the health of the dairy cow cannot be over-estimated.

Another important point is a comfortable bed. In these days of rigid economy the straw of the cereal crops is much too valuable as food to be used indiscriminately as litter, hence spent hops and moss litter is coming into general use. The former, though economical, is limited in quantity. For dairy cows or young stock I consider moss litter superior to all others; it absorbs and retains all the most valuable constituents of the manure. At present the chief objection to its use is its high price; hitherto we have been dependent on other countries for our supplies. As its merits become more fully recognized and our home sources of supply opened out, prices will undoubtedly recede. In all probability the manufacture of moss litter will, in the course of a few years, develop into an important native industry.

Humane treatment, regularity of milking, and feeding, exercise a marked effect on the yield and quality of the produce of the dairy cow; harsh treatment irritates and disturbs the nervous system; irregular feeding retards the natural action of the digestive and assimilative organs; one day they suffer from depletion, and the next day they are stunted. Irregularity in milking frequently causes considerable suffering on the animal, and detracts from its future usefulness.

The natural food of the dairy cow is confined to grass, either in its succulent state or when dried and converted into hay. The artificial foods embrace a wider range, including the straw and grains of the cereals, artificial grasses made into hay, rice, maize, and the residuum of linseed, cottonseed, palm nut, and rape seed; these are used in varying quantities by different individuals, who

each may have a separate object in view. Hitherto we have all been too ready to accept, as established facts, practices which have long survived, without having taken the trouble to sift the legendary from the canonical. As a case in point, roots of various kinds have been largely used during the autumn and winter months for the feeding of dairy cows in full milk for at least half a century, and in varying quantities—from twenty pounds to 120 pounds, or even more, per day. Although there is such a wide diversity amongst practical men as to the quantity, they are all agreed as to their value in increasing the yield of milk. On what does this special merit depend? If we take the different varieties of root-crops grown on the farm we find that, in roughly round numbers, they contain 90 per cent. of water and only 10 per cent. of dry matter; according to this, a dairy cow consumes 100 pounds of raw roots per day, ninety pounds (or exactly nine gallons) of which is water. Is the increased flow of milk due to the excessive quantity of liquid, or is it influenced by the peculiar constituents of the solid matter? Practical experience leaves me to accept the former as the true cause. The mangold contains less than 2 per cent. of flesh-formers, and about 8 per cent. of hydrocarbons, or heat and fat-producers. We estimate the cost of growing a ton of roots on the farm at 7s. 6d., while others estimate them at a much higher price; even at the price we have named, it is paying rather dear for the water, which we are prepared to show can be substituted at a nominal cost.

A common method of arriving at the feeding value of any variety of food is to accept as a standard some particular product of ascertained value as a measure of efficiency for that of other varieties. For our present purpose we take as our point of excellence well-saved meadow hay cut whilst the grasses were in bloom. Assessing the value of the others, according to this standard, 1 lb. of mixed meal is equal to 2½ lbs. of hay, whilst it takes 3½ lbs. of mangolds to equal in feeding value 1 lb. of hay. Bran is nearly of the same feeding value as hay. It requires 4 lbs. of green clover to equal 1 lb. of hay, and 1½ lbs. well-gotten oat-straw to equal 1 lb. of hay; 2 lbs. of linseed is equal to 1 lb. of hay. To revert again to the roots, which, if fed in a raw state and in large quantities, is questionable economy, under any circumstances the excessive quantity of cold water they contain lowers the temperature of the body, which can only be raised and maintained at the expense of the food. Large quantities of raw mangolds are positively injurious to the dairy cow; it is true they increase the flow of milk at the expense of quality. Unless cake or corn is largely used during the early spring months, the pale sickly tinge of the butter made in home dairies leads the practical observer to attribute it to the true cause. Those who are engaged in stock-rearing find it well nigh impossible to rear a healthy batch of calves on milk produced by cows eating excessive quantities of mangolds. I feel sure that many of you, as practical men, are able to confirm these remarks by your own experience. Those of you who are milk sellers know the difficulties there are in bringing up your produce to the 10 per cent. standard. I urge you to well consider these few simple remarks. It is not the moderate use, but the abuse of roots to which I wish more particularly to draw your attention; twenty-eight pounds of roots per day we consider the extreme limit to a dairy cow in full milk; without knowing the exact circumstances it is impossible to lay down any hard-and-fast rule as to quantities of food—the requirements vary with the bulk of the animal. Unfortunately the largest consumer is not always the heaviest producer. Other things being equal, a cow yielding four imperial gallons of milk per day requires a more liberal diet than one which is only yielding one gallon. In these high-pressure times it is no unusual occurrence to continue the milking to within a period of four or six weeks of the time of calving; where this system is carried out the cow should be well kept. It is economical to have the cow in good condition at the period of calving; this enables her to supply, to some extent, temporary deficiency in the quantity or quality of food.

The best and most economical system of feeding a dairy cow in full milk affords ample scope for the exercise both of practical and scientific knowledge of a high order. The selections of food should be such as will support respiration, supply the natural waste of tissue,

and stimulate the flow and quality of milk to its extreme limit without entailing an undue waste of food. Up to a certain point the animal system is capable of assimilating and converting into profitable produce the essence of the foods consumed; whatever is in excess of this is voided in the excrements, by which, consequently, owing to ill-constructed buildings and exposure to atmospheric influences, the principal manurial elements are greatly deteriorated in value. Hence it is obvious that rich concentrated foods fed in large quantity disturb the healthy action of the digestive organs and impede their powers.

As a practical man I would much prefer to purchase my artificial fertilizers under a guarantee of purity from the manufacturer rather than depend on the questionable fertility conveyed to the land by the residuum contained in the evacuations of a dairy cow in full milk. The quantity of food required to maintain a milking animal in a healthy state and produce the maximum result of quantity and quality of produce can only be approximately estimated. The skill of the manager must be exercised in apportioning the foods to meet the requirements of the different individuals of the herd. An average daily ration would be:—

	Pounds.
A mixture of cut hay and straw.....	20
Bean meal.....	2
Ground oats.....	2
A mixture of wheat and barley meal....	2
Linseed.....	2
Bran.....	2
Roots.....	25
Long hay, divided into two rations.....	5
Total.....	60

With the exception of the hay, the whole should be cooked or steamed, mixed with a large quantity of pure water, and fed in a semi-liquid state at a temperature of 55 to 60 deg. By this means the labor of the digestive organs is considerably lessened; the food largely mixed with water passes direct into the fourth or true stomach, and comes directly under the action of gastric juice and converted into chyme. The food thus immediately prepared passes through the lower orifice of the stomach into the intestines, where it becomes mixed with the pancreatic juice which separates the nutritive portion by minute hair-like vessels, and enters direct into the circulation.

At some of the butter dairies there is at this moment great difficulty in disposing of the skim milk. In some instances it is being returned to the milk suppliers at 2d. per imperial gallon; at this price, mixed with other foods, it is capable, when used in moderate quantities, of being profitably used as an adjunct to the food of cows in milk. Contrasted with other foods, it is the cheapest that can be used.

It is well known that the quantity of liquid imbibed by the cow exercises an appreciable effect on the quantity of milk. A milking cow kept on dry food will require from six to eight, or even more, imperial gallons of water per day. I maintain that a great portion of this should be mixed with the food instead of through an excessive quantity of roots, often fed at a low temperature. During the early summer, whilst the cows are grazing on succulent pastures, it will pay the farmer to give his cows three to four pounds of meal per day in order to maintain the standard quality of the milk.

My remarks are intended to apply to purely agricultural dairy farms, so to utilize the produce of the soil that it may insure the best return for the application of skill, labor and capital.—*Scottish Agricultural Gazette.*

Mann Boudoir Cars.

The Wabash is now running the celebrated Mann Boudoir cars between Kansas City and Chicago. This is the only line running these cars in the West.

Luminous trees are reported to be growing in a valley near Tuscarora, Nev. At certain seasons the foliage gives out sufficient light to enable any one near at hand to read small print, while the luminous general effect may be perceived some miles distant. The phenomenon is attributed to parasites.

Nervous Debilitated Men

You are allowed a free trial of thirty days of the use of Dr. Dye's Celebrated Voltaic Belt with Electric Suspensory Appliances, for the speedy relief and permanent cure of Nervous Debility, loss of Vitality and Manhood, and all kindred troubles. Also, for many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred. Illustrated pamphlet, with full information, terms, etc., mailed free by addressing Voltaic Belt Co., Marshall, Mich.

Exhaustion of the Soil.

There is a moral obligation resting on every cultivator of the soil, binding him to so till his land that its power to produce will be as little impaired as possible. That portion of our crops that is derived from the air and water is secured, and the perpetual supply may be counted on with reasonable certainty; but the mineral elements which are derived from the soil, are always in limited quantities and may be exhausted to such a degree by careless farming as to render the land incapable of producing remunerative crops. The substances most liable to be exhausted in cultivation are potash and phosphoric acid. This last is generally found in combination with lime, as in bones. It sometimes exists as a phosphate of potash, soda, or magnesia. Occasionally we find soils derived from sandstones that are deficient in lime. In these the lime may be so reduced as to make a failure of crop from that cause; but in our drift soil this seldom or never occurs. If potash is exhausted by constant cropping of wheat and corn, it may be restored by rest in all soils derived from granite rocks; and to a great extent our drift soils are of this character. This may be hastened by the cultivation of clover. This crop penetrates the subsoil below the depth of other crops and brings up a fresh supply of potash which the decay of its large roots leaves in the upper soil for the use of more shallow-rooted crops. But the greater part of the potash consumed in grain crops is used in the straw, and if this is returned to the field, either by barn-yard manure or straw, the exhaustion will be much slower. The potash in soils generally exists in combination with silica and is insoluble; but the action of the weather slowly decomposes this compound and liberates the potash in a soluble form ready for the use of crops.

Phosphate of lime is found in all virgin soils, and generally in sufficient quantities to supply the demand of growing crops for a number of years. But it is not an element of the ordinary rocks, from the decomposition of which our soils are formed. If, therefore, it be exhausted it must be supplied from abroad in the form of stable manure, guano, bone meal or some other animal substance. Limestones belonging to the Cincinnati group of the lower Silurian formation, which is composed largely of petrified shells, contain an appreciable amount of phosphate of lime, and soils derived from these rocks seldom lack phosphates, though they often are deficient in potash. The phosphates are used chiefly in the production of the seeds of plants. It follows, therefore, that a country devoted to grain-raising for exportation must, sooner or later, import phosphates or abandon the cultivation of her soil.

No nation has long survived her ability to feed her population from the products of her own soil. Italy, 300 years before Christ, had supported the population of Rome at the expense of her rich fields till famine threatened them and Rome resorted to war for bread to feed her famished population. Scipio, during the Punic wars, fed multitudes daily at the public expense, on food obtained by processes but little better than robbery. Augustus Caesar fed 300,000 of the population of Rome from the plunder of his conquests and the tributes from conquered provinces. Julius Caesar attempted to remedy this by laws demanding a more thorough cultivation of the home soil. But these laws were as ineffectual as had been the agrarian laws of Caius Gracchus, to supply food from an exhausted soil. Asia Minor and the rich plains of the Euphrates fed the commercial cities of the Mediterranean till their fields, once so fertile, became a desert, and the great nation that fed on them died of want.

Spain teaches us an instructive lesson. In the tenth century Moorish Spain supported from her own soil, a population of 30,000,000, but the rich plains of Andalusia now only yield a harvest once in three years, and Spain is in her dotage, for no nation can long survive the exhaustion of its soil. Portions of Virginia and Maryland that once produced generous crops are now given up to the old field pines. Their fertility was converted into tobacco and expected all over Europe. German potash, guano and bone meal may restore these, but it will be an expensive process.—*Indiana Farmer.*

The Chilian miner is considered one of the strongest men in the world, and he lives principally on the lentil, the cheapest and most nutritious food known for its weight.

The Poultry Yard.

A Good Home-made Incubator.

Mr. R. M. Ford had an article in the *Indiana Farmer* not long ago on the subject above named, in which he discussed the subject generally and gave his own experience also. Among other things he said:

The great drawback to most incubators is their extreme high price and their complicated construction. I have examined nearly all of the best machines, and those meriting the most praise are either so costly as to be out of reach of the general public, or so complicated as not to be understood and consequently soon get out of repair and are cast aside and condemned. The requisite beyond all other with successful machines, is uniformity of temperature. Next is moisture and ventilation. With these three ends attained, eggs can be hatched with little or no difficulty. Bearing this in mind, and also the cheapness of the material employed in the construction of even the most expensive of these devices, the question very naturally arises: "Why would I pay two or three hundred dollars for a machine that I can make for fifteen or twenty without infringing on anybody's patent?" Any individual with ordinary ingenuity can, with the plans and instructions herewith given, construct a machine that will hatch on an average 85 per cent. of all the healthy eggs put in it; permit me to say, however, that it is not best to make them too small, as it requires more attention to regulate the temperature or heat in a small machine than a large one; and again, a one-thousand-egg machine can be made very nearly as cheaply as one holding half that number. The plans submitted here are for a one-thousand-egg incubator. Those persons who are not accustomed to using a soldering-iron and tinner's scissors, will probably find it best to have the tank and lamp made by a tinner; and if desired, you may secure a better result in the woodwork by employing the services of a carpenter; and should you hire it all done, you will have a better machine than you could buy ready made, for many times the money invested.

To give an idea of the general outward appearance of the machine, I might say that it looks very much like a carpenter's tool-chest, if the latter was placed on legs eighteen inches high. It should be made of one-inch poplar or pine lumber (seasoned), with double walls, leaving an interspace of one and one-half inches to be tightly filled with sawdust.

A very convenient size and holding about one thousand eggs, is five feet long (externally,) two feet and ten inches wide and about two feet and eight inches deep.

The legs should be three inches in diameter where they enter the machine and half this at the lower end. The required degree of heat is maintained by means of hot water in four broad flat tanks, one over each egg tray, the water being kept warm by the heat of two coal oil lamps under the lower tank. As the water circulates freely from one tank to another, a uniformity of heat is also secured. The smoke from the lamps passes upward through the flues and does not come in contact with the eggs. The lamp flues are two tin tubes, one and one-fourth inches in diameter, passing from the lamp-box outward to the wall of the incubator, thence upward through the sawdust, and should project above the top of the machine about six inches; they should also have a slight enlargement in the tube just before they pass through the lid in order to produce a draft. There should be sufficient room between the top of the upper tank and the under surface of the box, to admit of the thermometer lying under the little glass door with a small piece of cloth or wood under it. I would also suggest that the woodwork be put together with screws, so that it may be more easily taken apart should any trouble occur from insufficient ventilation, leaking of the tank or other cause. The apertures for ventilation should be one inch in diameter, and should have tin tubes fitted in them, corresponding in length with the width or thickness of the walls. They should be arranged to close externally with small wooden buttons, constructed to slide over them. The glass over the thermometer should be fitted tightly into the lower side of the upper wall with putty, and the little

door over it made to fit closely in its place. There should be a section cut out of the center of the floor, fifteen inches long by eight in width, to receive the lamp-box; the lamp-box will be fifteen inches long, eight inches wide and twelve inches deep, fitting closely to the under side of the tank, having a door on one side its full length and one or more ventilators as may be required. The lamp should be a square-cornered box, twelve inches long, five inches wide by one and a half inches in depth; should be made of tin, with an ordinary lamp burner soldered on the top near each end; should have a one-fourth-inch tube passing from the lamp chamber outward through the wall of the lamp-box, so that the lamp may be filled from the outside. The water gauge is a tin tube, one inch in diameter, with a small strip of glass covering and forming its upper side, the tube being on a level with and passing into the upper tank near its surface; this allows the water to run out into the tube, and the depth of the water can be seen through the glass. The large door at the end of the machine should fit snugly and nicely, and if necessary, small strips of cloth may be tacked on its edges to insure a more perfect fit. The inside door containing the glass should also admit as little air as possible and should hang on hinges. There should also be two or more ventilators in the rear end of the machine.

The tanks, which should be made of sheet zinc, or some other material impervious to rust, should be four feet and six inches in length, two feet and three inches in width, by three inches in thickness; they should be connected by an upright tank of the same width and thickness, in the rear end of the machine, which in a four-tank machine should be two feet high. There should be a strip of heavy copper on the center of the bottom of the lower tank, as the heat of two lamps would soon burn a hole in the zinc; this strip should correspond in width and thickness with the lamp-box. The space between the tanks should be at least four inches and five would be still better. Strips of heavy zinc or other metal should be soldered on each side of the tanks near the forward end, as supports. There should be a stop-cock in the front end of the lower tank, to draw off the water when desired. There should be two open tubes passing down into the upper tank, so that the air may escape through one as the water is entering the other. That end of the tube fastened to the tank should not project more than three-fourths of an inch, so that after the tank is put in they may be passed through the walls and fitted on from the outside. The egg tray should correspond in length and width with the horizontal tanks, and should be at least two inches deep internally—the compartment should be about three inches square and lined on the sides with heavy Canton flannel, pasted on with glue; this prevents injury to the eggs by rolling against the sides of the tray when turning the eggs over. The sides should be of one-inch lumber and the partitions of one-half inch. The top and bottom of these trays should be just alike, and should be a frame on hinges covered with open gauze wire or netting; the wire being of some material that will not rust—the apertures in this netting should not be large enough to allow the feet of the chicken to become entangled when hatched.

The vapor pans are small, shallow zinc trays two feet and three inches in length, four inches in width, by three-fourths inches in depth; three to be placed on each tank, one in the middle and one at each end; these pans are intended to contain water, the vaporization of which, from the heat of the tanks, will produce sufficient moisture for the supply of the eggs, and without which the eggs would dry up. The machine should be filled with water previously heated to the proper degree and the heat regulated before the eggs are put in. The temperature can be successfully controlled by keeping the lamps at one height and by watching the thermometer closely until the heat becomes regular. If you desire an "electric" regulator go to any electrician and procure an ordinary thermostat, which you can correct with a valve to open and close as the temperature gets too high or low, or with a bell to ring from the same cause; the entire electric apparatus will cost you only about \$3. The eggs should be turned every six hours by withdrawing the tray and returning it the other side up. The objection urged by some incubator men to machines having one tray over the other, is entirely unfounded, and is based on a

desire to find some fault with every one else's invention but their own.

The tanks, however, should be far enough apart so that the eggs will be hatched by the heat from the tank above it, rather than that below, as the germ floats at the top of the egg and this is the part of it that requires the heat.

Keep the temperature as near 103 deg. or 104 deg. Fahr. as possible. Use fresh fertile eggs and keep the ventilators open, and your success is assured.

Horticulture.

Pear-Blight and Raising Pears.

J. L. Williams, of Oswego, this State, writing to the *Kansas City Live Stock Record*, says:

I have been giving some study to the above subject, and would like to say a few words to my brother horticulturists as to the result of my investigations.

Pear trees die from a large number of causes, about all of which are called pear-blight.

1. Trees grown rapidly to two or three years in nurseries have not genuine pear wood, and the best efforts of the cultivator generally fail to keep the same alive longer than three to four years and then call it blight.

2. Soil in which they are planted often has a lack of lime, potash and phosphate of lime, and in consequence die, and it is called blight.

3. Sometimes they are planted on soil having too much water, the roots becoming water-soaked—the trees die, and that is called blight.

4. Some have been headed too high; they get sun-scalded and die, and that is called blight.

5. A warm, wet autumn often causes the trees to make a late sappy growth, which makes them tender, and a warm winter will even kill them, and it is called blight.

6. The ground is sometimes rich in some pear food, and the trees make a rapid but not healthy growth, and they die; and that is called blight.

7. Planted too close, they become root-bound, the trees die, and that is called blight.

8. Budding a slow-growing variety on a seedling of very rapid growth, the roots take up more sap than the leaves can elaborate—the trees die, and it is called blight.

The above and a large number of other causes kill pear trees, and they are all called pear-blight.

I assert, after examining, for thirty years, thousands of trees in Indiana, Illinois, Iowa, Missouri and Kansas, that there is no such thing as pear-blight, or, if there is, it is in some corner where I have been unable to find it.

Pears can be grown successfully on almost all soils where apple trees grow well—if the subsoil is clay.

1. Select small trees having made only moderate growth.

2. Plant and cultivate as well as you would a crop of corn.

3. Pinch off the ends of all shoots when they have made one foot of growth. Pinch back three or four times during the summer and they will seldom need going over after August 1st.

4. Do not allow young trees to over-bear.

5. If in doubt about having sufficient lime, potash and phosphate of lime in the soil, apply a small quantity each year—more as the trees grow older. Give one-thousandth part the attention to your trees that you would to raising a colt or calf, and you will have an abundance of pears.

The Peach Borer and the Remedy.

The peach borer (*Aegeria exitiosa*), is among the worst enemies of the peach tree, and has much more to do with the decline of peach culture than is generally supposed. In some localities it is found to be impossible to raise peaches at all. Most of the trees are destroyed the first year after planting, and the balance die the second year. Usually the planter is not acquainted with the habits of the insect; does nothing to check its ravages, and concludes that it is useless to plant peach trees. A knowledge of the habits of the insect will afford hints as to the methods of prevention. We are told that "the eggs from which these borers are hatched are deposited in the course of the summer upon the trunk of the tree near the root; the borers penetrate the bark and devour the inner bark and sap-wood. The seat of their operations is known by the castings and gum which issue from the holes in the tree. When these borers are nearly one year old they make their cocoons, under the bark either of the trunk or of the root, or in the earth and gum contiguous to the base of the tree. Soon after they are transformed to chrysalids, and finally come forth in the winged state, and lay the eggs of another generation of borers. The last transformation takes place from June to October, most frequently, however, during the month

of July in the State of Massachusetts. Here, although there are several broods produced by a succession of hatches, there is but one rotation of metamorphoses consummated within a year. Hence, borers of all sizes will be found in the trees at all seasons of the year, although it seems to be necessary that all of them, whether more or less advanced, should pass through one winter before they appear in the winged state. Under its last form, the insect is a slender, dark blue, four-winged moth, having a slight resemblance to a wasp, or ichneumon fly, to which it is sometimes likened."

Many have seen the insect, doubtless, without knowing its name or character. The time to check its depredations, however, is not in the winged state, but at the time and place when and where the eggs are deposited. The favorite place of deposit is just at the base of the trunk, where the wounds made will have the protection of the earth. The deposit of eggs is indicated by the flow of gum, and this may be found around the root of almost any neglected peach tree, at any season when the ground is not frozen. This is the point where remedies must be applied to be effectual. The oozing of the gum on the limbs is generally slight, and is under easy observation, and can quickly be remedied with a sharp-pointed knife. To get down and dig away the earth, and rout the enemy with knife and wire, tests the backbone, as well as the faith and patience of the fruit-grower. After the worms are dug out, a popular remedy is the application of a plaster of wet clay to the wound, and a covering of the trunk with a strip of sheathing paper, eight or ten inches wide, extending an inch or two below the surface of the soil, tied in place, and further secured by a coating of plaster. This, no doubt, would be effectual, but it involves a little expense and a good deal of labor. I tried an experiment last spring, and an examination just made shows very satisfactory results, with much less labor. In the spring of 1882, I planted a dozen seedling peach trees of the Spanish variety. I lost several of them the first season, but nine of them survived, and last spring were dug around at the surface of the ground, cleaned, and the small basin made was filled with unbleached wood ashes. When examined last October, they were nearly all free from gum, and but few worms were found, in places not covered with the ashes. Eight budded peach trees from the nursery were planted last spring and mulched with straw, but not protected by ashes; these were all badly eaten, and more or less worms were found and destroyed. The wounds and collar, of course, were covered with ashes. This remedy is easily applied, and seems to be effectual.

—Cor. *American Agriculturist*.

Are You Going South?

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

Address, J. E. LOCKWOOD,
G. P. & T. A. Kansas City.

Paris is cleared of rats by her municipal council offering a premium for their skins. Two years ago the premium was \$3 per 1000, but it has recently been raised to \$10 per 1000, in order to get the city rid of the pests. The rats are of the Norway kind, and breed four times a year. The skins when collected are sold to glove makers for four cents each, and 20,000 skins are said to have been made into "genuine kid" gloves last year.

Plantain, dandelion and other weeds in a lawn may be destroyed by placing a little sulphuric acid with a stick in the crown of each plant. The acid should be carried in an open-mouthed bottle with a long handle, so that fingers and clothes are protected.

The Busy Bee.

Hiving Swarming Bees.

Mrs. Harrison, a successful bee-keeper in Illinois, wrote on this subject recently and her letter was published in the Prairie Farmer, as follows:

Whether the owners of few or many bees, all apiarists need good, clean, movable frame hives in readiness for the reception of swarms. Many valuable colonies yearly "emigrate," while their owners are getting ready to hive them. Some bee-keepers, on the spur of the moment, put them into nail kegs, or salt barrels, where they are of little or no value. If placed in old hives, with combs infested with larvae of the bee-moth, and foul from dysentery, the bees may seek more agreeable quarters, and when they leave, may not cluster again, in which case no amount of bell-ringing will stop them, for scouts that have been sent out to find a home have returned, and will conduct them directly to it. Sometimes a swarm will remain in a hive over night, and if the morning sun shines very hot upon it, leave for other quarters without clustering. Hives must be free from bad odors, and have plenty of ventilation.

Where swarms are expected, the location of the future colonies must be chosen, and the stands arranged for them; this is very important. If the hive leans to one side, or is lower at the back than at the front, all sorts of mishaps may be expected, such as the building of brood and surplus combs crosswise, so that they can not be lifted out. Some bee-keepers make a hard place for the hive to stand on, or spread on quantities of sawdust to keep down weeds and grass. If the foundation is built of brick, with two bricks high at the back of the hive and only one at the front, moisture will run off, and the dead bees and debris can be readily carried out. Let everything be firm, so that there will be no rocking in a storm. Have on a lighting-board, resting on the front edge of the brick so as to join on to the bottom of the hive, thus forming an easy entrance. This is quite important, for time means honey to the bees, so that if one heavily laden falls exhausted, it is not obliged to again take wing, but can crawl up the alighting-board into the hive. When the hive is placed upon the stand, have the frames arranged at regular distances. I have been requested to examine colonies, and when the frames were uncovered, found that in hiving the bees, and carrying them to their stand, the frames had all been shaken over to one side, and not one of them could be removed without regular transferring. Some hives have the rest holding the frames, cut into uniform spaces, so that this mishap can not occur. The frames should be covered with muslin, enameled cloth, or a board, so that the bees can crawl up. These things should be attended to before the hive is ready to swarm.

When a colony has clustered, if it is on a limb of a tree of little value, cut it off and carry to the hive; shake the branch gently at first and when a few bees have entered the hive, more can be jarred off. If they are shaken off violently at first, they may take wing again. When it is not desirable to cut off a branch, the bees can be shaken into a hiving-basket or large dish-pan and carried to the hive. When a swarm is very large and rich in wax, sometimes large clusters fall to the ground, in which case it is better to carry the hive to them; as soon as the bees are in replace upon its stand, lest when scouts return they lead them to a home of their own choosing. Some let the hive stand until evening before replacing; this is poor policy, as bees sometimes go to the fields as soon as hived, and take their bearings to the new place, and next day will return there, and not finding their hive, vent their spite on any one coming within reach. In very hot weather, take care that the hive is cool when bees are put into it, and that the sun does not shine directly upon it until the colony is firmly established in its new quarters.

Nothing is more exhilarating, or sends the blood tingling to the finger-tips of a veteran bee-keeper than to hear the slogan, "The bees are swarming!" The pleasant excitement is much more enjoyable when everything is at hand to hive them. If there is no step-ladder, and the kitchen table must be carried out and a barrel placed on it in order to reach the cluster, while the dirty dinner dishes are removed from a pan, there is little pleasure in hiving bees. If there is no protector for the head, and resort

is had to a hoop-skirt, covered with muslin or calico and tied at the top and held over the head with a broom inside, to keep off the bees as they fall, the trouble is heightened. Lack of proper appliances to hive a swarm often results in infuriating the bees, and they sting every person and animal they can get at, producing serious injury.

When a swarm clusters on the side of a tree, it is often quite difficult to hive them. By fastening a branch or basket above them, they can be driven into it and carried to a hive. Decoy hives can now be placed in trees by boys and girls, and obtain swarms which otherwise would enter hollow trees; any sort of a box or keg will answer the purpose.

Frozen Meat From New Zealand and Australia.

The production of meat is a large part of the farmer's work, and everything which helps him or suggests new ideas of ways and means has interest for him. The frozen meat business is growing. Kansas ought to have packing houses where animals might be slaughtered and the meat frozen and shipped. That would save millions in transportation.

At a recent meeting of the Canterbury (England) Farmers' Club, Mr. Basil Hodges, who had been investigating the frozen meat trade of New Zealand and Australia, delivered an address, which was published in an English agricultural paper. We give an extract:

In answer to inquiries on the frozen meat trade, the New Zealanders told me that they could sell the mutton at 2d. per pound. They like 2 1/2 d. better, but they can do with 2d. I asked, "Will you be able to continue this output? Is it not a surplus which must cease when the accumulation of animals has been cleared away?" The reply I received was, "Given that price, we shall be able not only to continue, but to increase our exports, because the average price we have obtained from the new method of sending frozen sheep has given us on the average nearly double what we were able to obtain before at the boiling-down establishments." There certainly is no place in the world in which the animals thrive better. At any rate, their competition must be a factor to be accounted for and to be considered when we are considering our position at home. An important part of this arrangement for sending us frozen meat is this: They have established, and are likely to maintain a class of rapid steamers, so that the opportunity of getting to New Zealand quickly, and at a less cost than was formerly the case, have multiplied exceedingly, and we must take it that they will receive a large number of people from England, bring a larger quantity of their land under cultivation, and so subject us to a greater amount of competition than we have yet experienced. I should have been glad to have been otherwise informed. I am speaking now so far as our own position is concerned. I should have liked to hear that they had sent us their surplus, and that the supply of meat would simply come in dribbles into this country, so that we might not regard it as anything very important. The reverse being the case, we ought to consider our position carefully, and make all arrangements and contracts with an expectation—if it is not realized so much the better—that we are to meet with great competition in the way of the supply of meat to the consuming population. The frozen meat trade is not confined to New Zealand. They are getting actively to work in New South Wales. One of my fellow-passengers was a Sydney man, who had 2,800 sheep on board the Iberia, the vessel that took the New South Wales contingent to the Soudan. These sheep were intended to come to London, but they were taken out for the soldiers, and I believe the troops were delighted to get a feed of fresh mutton in that torrid region. He intends to carry on the industry. He is a butcher, and he intends upon his return not to send whole sheep, but only the hind-quarters frozen. It appears that, for putting into tins, the fore-quarters are more valuable. They cut up better, and make better tinned meats than the hind half of the sheep. He proposes to cut the sheep in two, to sell the fore-quarters to the tinned meat establishments, and to send only the hind quarters frozen in the ship. You have to pay for so much space in the freezing room, and you put your animals as closely as you can consistently with a regard for their arriving in good condition. He claims that, by sending only hind-quarters, he can put a larger amount of meat into a given space, and thus reduce his charges. He expects, looking at the quotations in the English papers, to get a higher price than he would for the whole sheep, and for the fore-quarters he can get a satisfactory price at Sydney at the tinned meat establishments. In that way he expects to carry on his industry in a larger way and with a greater profit.

Replying to a question, Mr. Hodges said the freezing and transport charges amounted to about 3d. per pound, which, with the original value of the mutton, would bring up the price to 5d. or 5 1/2 d. per pound.

Thousands saved from death by Dr. King's New Discovery for Consumption. Trial bottles free.

THE STRAY LIST.

HOW TO POST A STRAY.

BY AN ACT of the Legislature, approved Feb 27, 1866, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and 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 in 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.

How to post a Stray, the fees and penalties for not posting.

Broken animals can be taken up at any time in the year. Broken animals can only be taken up between the 1st day of November and the 1st 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, 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.

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 description are 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 summons to three householders of the township to appraise such stray, summons to be served by the taker-up; said appraiser, 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, or take the same out of the estate of a disseisor, or take it to 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.

Strays for week ending July 8, '85.

Elk county--J. S. Johnson, clerk.

PONY--Taken up by A. W. Farr, of Union Center tp., May 27, 1885, one black horse pony, 7 years old, pale horsehoe brand on left shoulder, head-halter on; valued at \$30.

PONY--By same, one light bay pony mare, 9 years old, branded S. on right shoulder; valued at \$30.

Shawnee county--Chas. F. Spencer, clerk.

PONY--Taken up by P. O. D. Spencer, of Tecumseh tp., (P. O. Big Springs, Douglas county,) June 22, 1885, a chestnut sorrel horse pony, about 3 years old, 4 feet 2 inches high, harness or saddle marks, no brands; valued at \$30.

Decatur county--R. A. Reasoner, clerk.

HORSE--Taken up by Zarl H. Claar, of Bassettville tp., (Hawkeye P. O.), June 7, 1885, one bright bay horse, about 8 years old, branded B on left jaw; valued at \$35.

Sumner county--Wm. H. Berry, clerk.

MULE--Taken up by William Barr, of Belle Plaine tp., (P. O. Belle Plaine), May 18, 1885, one white mare mule, 15 1/2 hands high, 16 years old, leather head-stall with rope hitch-rein, shod, harness marks; valued at \$50.

Ness county--James H. Elting, clerk.

MARE--Taken up by A. E. Cole, of Franklinville P. O., June 18, 1885, one dun mare, white strip in forehead, Spanish brands on left shoulder, 10 years old; valued at \$38.

MARE--By same, one buck (the color is written thus) mare, both hind feet white, star in forehead, Spanish brands, 8 years old; valued at \$38.

Harvey county--John C. Johnston, clerk.

HORSE--Taken up by Henry Reardon, of Newton tp., June 14, 1885, one light bay horse, about 15 hands high, age unknown, badly knee-sprung in both knees, bunches on both hind legs similar to spavin, a little white on the nose, had a halter on with the shank tied up; valued at \$40.

Ford county--S. Gallagher, Jr., clerk.

HORSE--Taken up by L. B. Huttman, Spearville tp., June 13, 1885, one bay horse, 4 years old, white hind legs up to hock-joint; valued at \$75.

HORSE--By same, one black horse, 15 years old, small white spot on left side of neck, near shoulder; valued at \$40.

Strays for week ending July 15, '85.

Smith county--J. N. Beacorn, clerk.

GELDING--Taken up by F. F. Cole, of Harvey tp., June 8, 1885, one light iron-gray gelding, 6 years old, weighs 950 pounds, branded O L on left hip, 15 1/2 hands high, scar on right side and top of head; valued at \$75.

Atchison county--Chas. H. Krebs, clerk.

MARE--Taken up by Taylor P. Aikens, of Kaploma tp., (Arrington P. O.), June 22, 1885, one sorrel mare, white stripe in face, spavined in right hind leg, harness marks in various places, about 15 hands high, 12 years old; valued at \$60.

Clark county--J. S. Myers, clerk.

COW--Taken up by G. W. Wilson, of Center tp., (P. O. Ashland), June 19, 1885, one dark red cow, 4 years old, branded H. B. on right hip and three bars on left side, left ear cropped; valued at \$25.

MARE--Taken up by E. G. Lee, of Center tp., (P. O. Ashland), June 10, 1885, one iron-gray mare, 15 hands high, 8 years old, collar mark on shoulder and scar on left forearm; valued at \$65.

Strays for week ending July 22, '85.

Leavenworth county--J. W. Niehaus, clerk.

HORSE--Taken up by J. D. Hines, of Easton tp., one dark brown horse, 11 or 12 years old, saddle marks, slightly knee-sprung, stiff in shoulders; valued at \$50.

PONY--Taken up by Valentine Krapp, of Sherman tp., June 12, 1885, one bay horse pony, white star on forehead, left hind foot white, some saddle and harness marks, 14 1/2 hands high, supposed to be 11 or 12 years old; valued at \$25.

Reno county--W. R. Marshall, clerk.

SOV--Taken up by George Avery, of Hayes tp., July 2, 1885, one 1-year-old sow with pig, black with white feet; valued at \$10.

Butler county--James Fisher, clerk.

HORSE--Taken up by John Lipscomb, of Spring tp., June 18, 1885, one dark bay horse, supposed to be 10 years old, medium size, both hind feet and left fore foot white above pastern joint, white saddle marks on each side of back, white star in forehead, no other marks or brands visible; valued at \$75.

Elk county--J. S. Johnson, clerk.

MARE--Taken up by C. H. Branch, of Pawpaup tp., June 8, 1885, one dark bay mare, about 15 hands high, about 10 years old, saddle and collar marks; valued at \$75.

Ford county--Sam'l Gallagher, Jr., clerk.

COLT--Taken up by Edward E. Lawrence, of Spearville tp., June 19, 1885, one dun mare colt, small slit in our ear.

PONY--By same, at same time, one light roan mare pony, 6 or 7 years old, branded M. O. on left hip.

Montgomery county--H. W. Conrad, clerk.

MARE--Taken up by Wm. Persinger, of Sycamore tp., June 15, 1885, one sorrel mare, 7 years old, blaze in face, both left feet white; valued at \$70.

MARE--By same, one gray mare, 2 years old, slit in right ear; valued at \$40.

MULE--By same, one black horse mule, 2 years old; valued at \$60.

Linn county--J. H. Madden, clerk.

HORSE--Taken up by B. M. Thompson, of Polcot tp., June 29, 1885, one bright bay horse, star in forehead, about 15 hands high, has collar marks, is lame in right fore leg; valued at \$60.

CAMPBELL Normal University, HOLTON, (Jackson Co.,) KANSAS.

Regular Collegiate Course. Three Years of Forty-eight Weeks each.

Eight Irregular Courses--Including Commercial, Fine Art, Musical, Engineering, and Preparatory Medical.

EXPENSES: From September to June, \$125 to \$150. From September to April, \$100 to \$125.

The Instruction is Practical and Thorough. New Classes are organized every Term. Students enter at ANY TIME and CHOOSE THEIR STUDIES. The MUSIC DEPARTMENT, in charge of Prof. Henry H. Morrill, late instructor in Academy of Music, Boston, will not be equaled in any other school in the West.

Catalogues and circulars sent free. Address J. H. MILLER, President. FALL TERM OPENS SEPTEMBER 1, '85.

KANSAS FARMERS' MUTUAL FIRE INSURANCE CO., ABILENE, : KANSAS.

OFFICERS: J. E. BONEBRAKE, President. O. L. THISLER, Vice President. M. F. ABBOTT, Secretary.

INSURES Farm Property and Live Stock AGAINST Fire, Lightning, Tornadoes and Wind STORMS.

The Company has now complied with the law enacted by the last Legislature for Mutual Fire Insurance Companies to create a guarantee capital and now do business on a cash basis.

AGENTS WANTED in Every County in Kansas. For any information, address the Secretary, Abilene, Kansas.

FENCES FOR FARMERS AND LAND-OWNERS. PRETTIEST, STRONGEST, CHEAPEST, AND MOST DURABLE OF ALL. Can be made any size on our Standard Fence-Making Machine, which we furnish at a price within the reach of all. We give exclusive territory free. Owners of our machine are making \$15.00 to \$25.00 a day at home selling fence. Agents who travel and sell our machines are making \$50.00 to \$100.00 per week in their own county. We can furnish any one with a profitable manufacturing business at home, or employment as traveling salesmen. We are also dealers in wire and pickets. Illustrated catalogue, terms, etc., free. STANDARD MFG. CO., Cincinnati, Ohio.

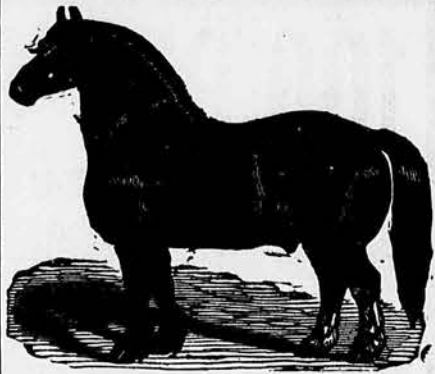
Kansas Fairs.

The following counties have reported dates for holding their annual fairs, giving name of Secretary and the place of holding the fair:

- The Western National Fair (Bismarck), Lawrence, September 7-12; Secretary, R. W. Cunningham.
- Anderson County Fair Association, Garnett, August 25-28; Secretary, M. L. White.
- Bourbon County Fair Association, Fort Scott, October 6-9; Secretary, E. W. Hulbert.
- Brown County Exposition Association, Hiawatha, September 8-11; Secretary, C. H. Lawrence.
- Butler County Exposition Association, El Dorado, September 29 to October 2; Secretary, H. W. Beck.
- Chase County Agricultural Society, Cottonwood Falls, September 22-25; Secretary, E. A. Kinne.
- Cherokee County Agricultural and Stock Association, Columbus, September 8-11; Secretary, S. O. McDowell.
- Clay County Agricultural Society, Clay Center, September 15-18; Secretary, Wirt W. Walton.
- Coffey County Fair Association, Burlington, September 15-18; Secretary, J. E. Woodford.
- Cowley County Fair and Driving Park Association, Winfield, September 21-25; Secretary, D. L. Kretzinger.
- Dickinson County Agricultural and Industrial Association, Abilene, September 23-26; Secretary, H. H. Floyd.
- Doniphan County Agricultural, Horticultural and Mechanical Association, Troy, September 15-18; Secretary, Thos. Henshall.
- Elk County Agricultural Society, Howard, September 15-18; Secretary, J. V. Bear.
- Western Kansas Agricultural Fair Association, Hays City, September 22-25; Secretary, P. W. Smith.
- Franklin County Agricultural Society, Ottawa, September 28 to October 2; Secretary, John B. Shaffer.
- Harper County Agricultural and Mechanical Association, Anthony, September 1-5; Secretary, J. W. Clendenen.
- Harvey County Agricultural Society, Newton, September 22-25; Secretary, A. B. Lemon.
- Jefferson County Agricultural and Mechanical Association, Oskaloosa, September 30 to October 2; Secretary, A. J. Buck.
- Valley Falls District Fair Association, Valley Falls, September 1-4; Secretary, M. M. Maxwell.
- Jewell County Agricultural and Industrial Association, Mankato, September 29 to October 2; Secretary, Geo. A. Bishop.
- Johnson County Co-operative Fair Association, September 23-30; Secretary, C. M. T. Hulet.
- LaCygne District Fair Association, LaCygne, September 29 to October 2; Secretary, O. D. Harmon.
- Marion County Agricultural Society, Peabody, September 1-4; Secretary, L. A. Buck.
- Marshall County Fair Association, Marysville, September 22-25; Secretary, C. B. Wilson.
- McPherson County Fair Association, McPherson, September 29 to October 2; Secretary, J. B. Darrah.
- Miami County Agricultural and Mechanical Association, Paola, October 7-10; Secretary, H. M. McLachlin.
- Montgomery County Agricultural Society, Independence, September 16-19; Secretary, B. F. Devore.
- Morris County Exposition Company, Council Grove, September 29 to October 2; Secretary, F. A. Moriarty.
- Nemaha Fair Association, Seneca, September 15-18; Secretary, W. E. Wilkinson.
- Phillips County Agricultural and Mechanical Association, Phillipsburg, September 16-18; Secretary, J. W. Lowe.
- Rice County Agricultural Society, Lyons, October 13-16; Secretary, C. W. Rawlins.
- The Blue and Kansas Valley Agricultural Society, Manhattan, August 25-28; Secretary, S. H. Sawyer.
- Saline County Agricultural, Horticultural and Mechanical Association, September 29 to October 2; Secretary, C. S. Martin.
- Arkansas Valley Agricultural Society, Wichita, October 5-9; Secretary, D. A. Mitchell.
- Sumner County Agricultural and Mechanical Association, Wellington, September 8-11; Secretary, D. A. Epy.
- Neosho Valley District Fair Association, Neosho Falls, September 21-24; Secretary, O. S. Woodard.
- Decatur County Exposition Society, Oberlin, September 23-25; Secretary, T. D. Bebb, Vallonia.
- Smith County Agricultural Society, Smith Center, September 23-25; Secretary, F. J. Pattee.
- The Kansas City Fat Stock Show, Riverview Park, Kansas City, October 29 to November 5; Secretary, Edward Haren.

There is a good deal more truth than poetry in the statement of a Canada paper, that a scrub heifer bred to a thoroughbred bull for her first calf, and then repeatedly bred to the same bull will improve in her breeding so that each succeeding calf will be better than the preceding one, and this to a greater extent than if she had been bred to different bulls, though all equally good, and of the same blood. This rule holds good with horses and sheep, as well as cattle. Stick a pin right here. If you are breeding cattle get a good bull and keep him. If you calculate to breed Durhams, do so; if Holsteins or any other breed, do so; but don't breed to a Durham bull one year and a Holstein the next. You must stick to one thing if you expect to breed good grades of either; and more than this, a cow that has once been bred to a scrub bull, if bred promiscuously to different bulls, even of the same breed, will never produce as good calves as she would if bred several times in succession to the same individual bull.

PERCHERON NORMAN, CLYDESDALE and ENGLISH DRAFT HORSES.



E. BENNETT & SON
Importers and Breeders,
Topeka, : Kansas.
All stock registered. Catalogues free.

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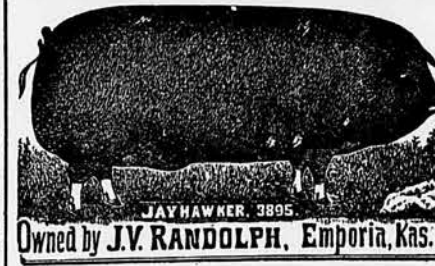
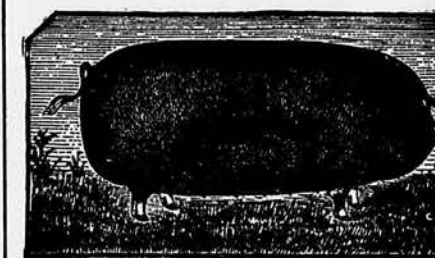
50 HEAD OF IMPORTED NORMAN STALLIONS

Just arrived from France, added to my stock of Norman Horses, which now numbers upwards of 100 HEAD, from 2 to 5 years old. Parties wishing to purchase first-class stock will do well to call and see my Normans before purchasing elsewhere. Prices and terms to suit purchasers. All of the above stallions were selected by myself in France this season. (Mention this paper.)

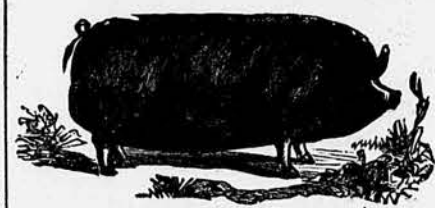
JAMES A. PERRY
Importer and Breeder of Norman Horses,
River View Stock Farm, Wilmington, Ill.
Fifty miles south of Chicago, on the Chicago & Alton railroad.

SEED WHEAT

CROP OF 1885, READY BY JULY 10TH.
All the hardy and improved varieties, many that have withstood the past winter almost entirely uninjured, will be ready for delivery by July 10th or 15th. Samples with mode of culture, sent on receipt of 6 cents in postage stamps. Address
SAMUEL WILSON, Mechanicsville, Bucks Co., Penna.



Owned by **J.V. RANDOLPH, Emporia, Kas.**
Established in 1888.



EARL OF CARLISLE 10459,

A son of Imp. Royal Carlisle 3433 and Imp. Fashion, and Duke of Wellington 12392, winner of second prize at St. Louis Fair in 1884, under one year old. My pigs this spring are very fine, from five different boars. I never have had a case of disease in my herd of any kind. Have some choice Boars now ready for service, also one young **SHORT HORN BULL**—one individual and fashionably bred.
I would always prefer parties to
Come and See My Stock Before Purchasing,
But orders trusted to me will receive my own personal attention and will be filled with care, for I will not send out stock that I would be ashamed to keep myself. Catalogues will be ready soon. Correspondence solicited.
JAMES ELLIOTT, Abilene, Kansas.

PURE-BRED Berkshire and Small Yorkshire SWINE.



We are breeding 25 of the best selected sows of the above named swine to be found in the country, direct descendants from *Imported Sires and Dams*. We are prepared to fill orders for either breed, of both sexes, at the very lowest prices.

We have tried Small Yorkshires thoroughly, and are satisfied that they cannot be excelled as a profitable hog to raise. They are very docile and mature rapidly. Send for prices and catalogue to
WM. BOOTH & SON,
Winchester, Jefferson Co., Kas.

PLEASANT VALLEY HERD OF Pure-bred Berkshire Swine.



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

POLAND-CHINA SWINE.	<p>If you want A YOUNG SOW, Bred to our crack Boars;</p> <p>If you want A YOUNG BOAR Pig;</p> <p>If you want A YOUNG SOW Pig;</p> <p>If you want to place an order for A SPRING FIG;</p>	<p>If you want A SETTING OF Plymouth Rock Eggs, at \$1.50;</p> <p>If you want a Thoroughbred SHORT-HORN BULL, From \$100 to \$125.</p> <p>Write to MILLER BROS., Junction City, Box 298. - Kas.</p>
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TIMBER LINE HERD OF HOLSTEIN CATTLE and POLAND-CHINA PIGS.

We have on hand 150 head of fine pigs for sale now and for spring trade. Also a fine yearling Holstein bull and a few grade Holstein cows for sale. Splendid milkers. We guarantee satisfaction. All correspondence answered. Inspection invited.

W. J. ESTES & SONS,
Andover, Butler Co., Kas.

RIVERSIDE HERDS POLAND and BERKSHIRE SWINE.

Having been a breeder of Poland China Swine in Kansas for seventeen years, it is with pride as well as pleasure that I announce to the people of the New West that I am offering the finest lot of Pigs that I have ever seen offered, representing the best strains of the breeds, and thoroughbred. I will fill orders of either sex and any age at reasonable figures. All stock warranted to give satisfaction. Come and see my stock or write, and if not as represented, I will pay your expenses. Orders promptly filled.

J. V. RANDOLPH, Emporia, Kansas.

ABILENE HERD OF BERKSHIRES FOR 1885.

COMPRISING the choicest strains of blood bred to perfection, including ten different families known to fame, such as the Sallie, Sweet Seventeen, Cassanara and Gipsy families. At the head of my herd stands

EARL OF CARLISLE 10459,

A son of Imp. Royal Carlisle 3433 and Imp. Fashion, and Duke of Wellington 12392, winner of second prize at St. Louis Fair in 1884, under one year old. My pigs this spring are very fine, from five different boars. I never have had a case of disease in my herd of any kind. Have some choice Boars now ready for service, also one young **SHORT HORN BULL**—one individual and fashionably bred.
I would always prefer parties to
Come and See My Stock Before Purchasing,
But orders trusted to me will receive my own personal attention and will be filled with care, for I will not send out stock that I would be ashamed to keep myself. Catalogues will be ready soon. Correspondence solicited.
JAMES ELLIOTT, Abilene, Kansas.

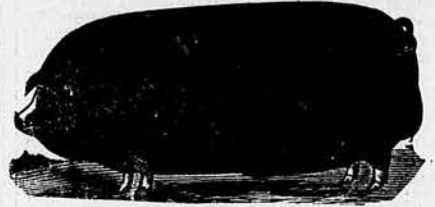
MEADOW BROOK HERD



OF POLAND-CHINA SWINE.

Breeding Stock recorded in American and Ohio Records. Tom Duffield 1875 A. P.-C. B., at head of herd. Always apace with latest improvements of the favorite breed. Personal inspection solicited. Correspondence promptly answered.

JELLEY & FILLEY, Proprietors,
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RANKIN BALDRIDGE, Parsons, Kansas,

Breeder of Pure Poland-China Hogs. This herd is remarkable for purity, symmetry, and are good breeders. Black Jim, a prize-winner, bred by B. F. Dreyer, heads the herd. Stock recorded in Central Poland-China Record. Correspondence invited.

THOROUGHbred POLAND-CHINAS



As produced and bred by **A. C. MOORE & SONS, Canton, Ill.** The best hog in the world. We have made a specialty of this breed for 38 years. We are the largest breeders of *thoroughbred Poland-Chinas* in the world. Shipped over 700 pigs in 1883 and could not supply the demand. We are raising 1,000 pigs for this season's trade. We have 150 sows and 10 males we are breeding from. Our breeders are all recorded in *American P.-C. Record*. Pigs all eligible to record. Photo card of 43 breeders free. *Swine Journal* 25 cts. in 2-cent stamps. Come and see our stock; if not as represented we will pay your expenses. Special rates by express.

Poland-China and Berkshire HOGS.



We have for sale a fine lot of Poland-China and Berkshire Pigs, from 2 to 6 months old. Ours is the **Largest herd of pure-bred Swine** in the State, and the very best strains of blood of each breed. If you want any of our stock write us and describe what you want. We have been in the business many years, and have sold many hogs in this and in other States, and with universal satisfaction to our patrons. Our hogs are fine in form and style, of large stock, quick growth, good bone, hardy and of wonderful vitality. Our Poland-Chinas are recorded in the *American Poland-China Record*.

RANDOLPH & RANDOLPH,
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OTTAWA HERD OF Poland-China and Duroc Jersey Red Hogs.



I. L. WHIPPLE, Prop'r, Ottawa, Kas.

I have for sale a fine lot of young pigs sired by Jayhawker 2639, Ottawa King 2885 (the champion hogs of Franklin county), and Buckeye Boy 2d 2219, Ben Butler 2377, Leek's Gilt-Edge 2887, which are very fine breeders of fashionable strains. My sows are all first-class and of popular strains. I also have an extra fine lot of Duroc Jersey Red pigs for sale from sires and dams that have never been beaten in the show ring in four counties in Kansas. I have hogs of all ages in pairs or trio, of no kin, for sale. Herd has taken over twenty prizes this last year. My herd has never had any disease. Stock all eligible or recorded in *Central Record*. Please call and see stock, or write and give description of what you want. Inquiries promptly answered. Farm, three miles southeast of Ottawa, Kas.

Chester White, Berkshire and Poland-China Pigs, fine Setter Dogs, Scotch Collies, Fox Hounds and Beagles, Sheep and Poultry, bred and for sale by **W. GIBBONS & Co.,** West Chester, Chester Co., Pa. Send stamp for Circular and Price List.

This, That and the Other.

Uneasy lies the head that has no crown in fly time.

'Tis not yet too late. Seize wisdom ere 'tis torment to be wise; That is, seize wisdom ere she seizes thee. —Young.

Home is the sacred refuge of our life, Secured from all approaches but a wife; If thence we fly, the cause admits no doubt, None but an innate foe could force us out.

A little boy who was taken to the theatre for the first time informed his fond parent that the dancers were all very poor, because they did not have money enough to buy skirts for their dresses.

The commerce of the seas is carried on by about 12,000 steamers and more than 100,000 sailing vessels, while the railroad traffic of the world employs about 68,000 locomotive engines and 120,000 passenger and 500,000 freight cars. There are 200,000 miles of track, and the capital invested is \$200,000,000.

Impermeable floors are now regarded as indispensable features in houses constructed on hygienic principles. They must be so treated that the wood cannot absorb moisture; rough places must be made smooth, and such cracks or depressions as give rise to the smallest accumulations of dust are not permissible.

Two Frenchmen, the brother Forre, have invented a new kind of harp, made entirely of wood. Instead of strings, the inventors use strips of American fir. The sound is produced, as in the ordinary harp by the contact of the fingers, but the player wears leather gloves covered with resin. The tone of the instrument is said to be of remarkable purity.

Two full-grown robins were seen recently near Monticello, Ind., one of which appeared to be helpless and the other protecting and consoling it. The well bird frequently went on expeditions to the back yards of the neighborhood and brought choice morsels of food to its sick companion. The latter was caught by a boy and found to be totally blind.

Fourcalt varnished the skin of animals, and found that death followed in some instances in a few hours, but generally in one, two or three days. In all cases the quality of the blood was altered, and the mucous and serous membranes lining the interior of the body were diseased. Hence the very obvious demand for porosity in all our clothing which these facts so unanimously indicate.

A Lewiston (Me.) physician's father, when quite young, was bitten by a vicious horse, the horse's teeth closing over his ear lobe and taking out a small piece on the upper part. The mark of the wounded ear skipped one generation and has appeared in the Lewiston physician's son, there being on the little fellow's ear the plain marking of the ear that showed, years ago, upon his grandfather.

Baron Huddleston, the English judge recently complained in court that his morning slumbers were daily disturbed by the crowing of a cock, and accordingly the neighborhood was searched for the offending fowl. None could be found, until at last it was discovered that one was confined in the baron's own garden, which had been purchased by his own order and kept in a hamper "to be killed when wanted."

Probably the most unpretentious tourists' hotel in existence is that at the bottom of the Grand Canon of the Colorado, accessible by stage from Peach Spring Station, on the Atlantic and Pacific Railway. It consists of a board shanty, of a single room below, with a kitchen attached, and two bedrooms under the roof above. The stage driver is road owner, guide, landlord and cook, all in one, but makes his guests comfortable. The distance from the station is only a few miles, but the descent is 4000 feet.

O long and lagging hours of time How heavily the hope you mock How slow you creep across the clock, When the child waits for you to chime The year returning in its prime— Yet all so glad! yet all so glad!

O hurrying hours, when age is nigh So breathlessly you sweep along, So fast your flashing circles throng By falling sense and dazzled eye, We scarcely see them as they fly— And all so sad! and all so sad?

—Harriet Prescott Spofford, in Harper's Magazine.

Lord of two elements, with bounding heart, And tingling blood and mighty strength of limb,

Stroke after stroke he swiftly cleaves apart The lambent emerald waters bearing him. Or diving through the vast, dim underworld,

He seeks the fabled mermaids hidden there, Rising to shake his locks all spray-pearled,

And draw a long breath of the Summer air. Again he idle floats a little space, Letting the lucent weight of each cool wave,

Crossing, as a kiss, his happy face And all his outstretched length of body lave.

Then from a height with free, exultant spring He dives again, and feels himself a King.

—Julia Ditto Young, in the Current.

A Chicago hotel keeper had a man recently arrested for stealing a cake of soap. The man pleaded, in extenuation of his offense, that he wanted it for his collection of curiosities, it being the first cake of soap he had ever discovered in a Chicago hotel.



Cuticura

A POSITIVE CURE for every form of SKIN AND BLOOD DISEASE FROM PIMPLES TO SCROFULA.

ECZEMA, or Salt Rheum, with its agonizing itching and burning, instantly relieved by a warm bath with CUTICURA SOAP and a single application of CUTICURA, the great Skin Cure. This repeated daily, with two or three doses of CUTICURA RESOLVENT, the New Blood Purifier, to keep the blood cool, the perspiration pure and unobnoxious, the bowels open, the liver and kidneys active, will speedily cure Eczema, Itch, Ringworm, Psoriasis, Lichen, Prurigo, Scall Head, Dandruff, and every species of Itching, Scaly, and Pimply Humors of the Skin and Scalp, with Loss of Hair, when the best physicians and all known remedies fail.

CUTICURA REMEDIES are absolutely pure and the only infallible Blood Purifiers and Skin Beautifiers free from poisonous ingredients. Cuticura, 50 cents; Soap, 25 cents; Resolvent, \$1. Prepared by POTTER DRUG AND CHEMICAL Co., Boston, Mass.

Send for "How to Cure Skin Diseases."



TOPEKA MEDICAL AND SURGICAL INSTITUTE.

PERMANENT AND RELIABLE.

DRS. MULVANE, MUNK & MULVANE, Physicians and Surgeons in charge.

Treat successfully all curable diseases of the eye and ear. Also catarrh of the nose, throat and lungs, by new and sure methods.

All Manner of Chronic, Private and Surgical Diseases Successfully and Scientifically Treated.

Patients Treated at Home, BY CORRESPONDENCE.

Send for circular and printed list of questions. Correspondence and consultation strictly confidential.

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Beauty of Tone, Elegance of Finish,

THOROUGHNESS OF CONSTRUCTION.

The IVERS & POND PIANOS are the result of the most extended experience, greatest skill and ample capital. Eighty of these pianos have been purchased and are in daily use by the New England Conservatory of Music, the most important musical college in the world.

Sold by responsible Dealers everywhere throughout the United States.

Fully Warranted for Five Years. Illustrated catalogue furnished free on application.

GENERAL WARE-ROOMS, 597 Washington St., Boston, Mass.

WASHBURN COLLEGE

TOPEKA, : : : KANSAS.



FALL TERM BEGINS SEPTEMBER 16, 1885.

OPEN TO BOTH SEXES.

Four Courses of Study—Classical, Scientific, Academic, Business. Personal supervision exercised. Separate Christian Homes provided for young women. Ten instructors employed. Excellent appliances of Library, Apparatus and Cabinet. Expenses reasonable. PETER MOVIOAR, President.

100,000 PRESENTS GIVEN AWAY.

In order to secure 100,000 subscribers, any person who sends as directed, gets a present worth from 20 cents to \$500. The proprietors of CITY AND COUNTRY, the Leading Illustrated Literary and Agricultural Journal of the Middle States, have determined to use a portion of their capital for the purpose of increasing their circulation, already large, to 100,000 copies, and have adopted the following plan:

FOR FIFTY CENTS

We will place your name on our subscription books and mail this paper regularly to you Six Months and send a numbered receipt, which will entitle the holder to one of the following presents:

LIST OF PRESENTS TO BE GIVEN AWAY.

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1 Three Seat Rockaway 200
1 Silver Dinner Service 100
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20 U. S. Greenbacks of \$50 each 1,000
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1000 Pocket Silver Fruit Knives 1,000
1000 Gents' Pocket Knives 1,000
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10 Gents' Gold Watches, Eng. Mov'm't 800
10 Ladies' " " " " " " " " 600
20 Boys' Silver " " " " " " " " 200
8 Solitaire Diamond Rings 400
3 Patent Harvesters 1,000
2000 Elegant Art Gems 1,000
5 Raw Silk Parlor Suit Furniture 1,000
1400 Gold Finger Rings, Ladies, Breast Pins, Gents' Scarf Pins, Lockets, Fans and Chains, and 92,481 other presents, valued from 20 cents to \$1, making a grand aggregate of 100,000 presents, and guaranteeing a present to each and every subscriber who sends 50 cents or \$1.00.

FOR ONE DOLLAR

We will enter your name on our subscription books and mail CITY and Country regularly to you one year, and immediately send two numbered receipts. If any one desires four receipts, they will be sent for \$2.00 and their subscription will be entered up for two years.

All of the above presents will be awarded in a fair and impartial manner. Presents will be sent to any part of the United States or Canada. The money you send is the subscription price of the paper for either six or twelve months, and therefore we charge nothing for the present. Our Profit will be in your future patronage and the increased rate we will get for our advertising space. Your Subscription Free! Get five of your friends to join you by cutting this out and showing it to them. Send us \$5 and we will send you City and Country for one year and two numbered receipts for each of your subscribers and two extra for your trouble. Send ten subscribers, worth \$10, and we will send you 12 subscriptions and 24 receipts. We shall limit the number of subscriptions to 100,000, and this offer will hold good until November 1st. Our friends should forward their names at once.

500 Stem Winding Watches Free!

In order to test the value of the papers in which this advertisement appears, and to positively secure the 100,000 subscribers required by the 1st of November, we will give away 500 Stem-Winding Waterbury Watches to the first 500 persons who answer this advertisement by mail, and who send us two names for one year, with \$2.00 enclosed. This will entitle the holder to a reliable Watch and four receipts.

In the December number of City and Country we will print in full the names and addresses of the winners of the 500 watches. Don't wait, but send your name with that of a friend, now.

A Valuable Residence Lot in Columbus Free!

To the person who sends us the largest number of subscribers from one locality, city, town, county or State, between this time and until the award is made, we will present them with a deed for an elegant residence lot in Columbus, Ohio, free from all encumbrance and valued at \$500. This offer in no way affects the 100,000 presents offered in order to secure 100,000 subscribers.

CITY AND COUNTRY (established in 1881) is a 28-page Illustrated Family monthly for everybody, whether living in City or Country. It has departments devoted to Agriculture, Beekeeping, Art Needle Work, Boys and Girls, the Family Physician, Fashions, Floriculture, the Household, the exchanging of articles among subscribers, Knitting and Crochet, Law, Poultry and Veterinary Surgery. Each department is under the control of a special editor who will cheerfully answer, without charge, all questions asked by subscribers relating to their department. At its subscription price of \$1.00 it will be found to be the best paper taken in the family. It is full of illustrations and valuable information.

These Presents are given to our Subscribers absolutely free. [2-cent postage stamps taken.] Money in sums of \$1.00 or less may be sent through the Mail, at our risk; large sums by Registered Letter, Postal Note or express, and addressed to

CITY AND COUNTRY, Converse Building, E. State St., Columbus, Ohio.



COLLEGE OF THE SISTERS OF BETHANY.

TOPEKA KANSAS

BETHANY COLLEGE

Under care of the Protestant Episcopal Church. For Girls and Young Ladies exclusively. Boarding and Day Pupils.

Twenty-six Officers and Teachers.

Faithful Maternal oversight for all intrusted to our care. All branches taught—Kindergarten, Primary, Intermediate Grammar, and Collegiate: French, German, the Classics, Instrumental and Vocal Music, Elocution, Drawing, Painting.

The Music Department employs eight teachers, and twenty pianos and three organs. In the Art Department the Studio is fully equipped with casts, models and copies.

Send for Catalogue to T. C. VAIL, Bursar, or BISHOP P. VAIL, President, Topeka, Kansas.

FALL TERM--Begins September 9th, 1885.

ILLINOIS FEMALE COLLEGE, Jacksonville, Ill.

Best Literary, Musical and Fine Art Facilities. Musical Faculty from Conservatory, Boston, with same methods. Pupils receive all new and valuable ideas and methods in solid and ornamental culture. Address REV. W. F. SHORT D. D. Pres.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce street), where advertising contracts may be made for it IN NEW YORK.

Advertisement for Singer Sewing Machines, featuring an illustration of a sewing machine and text describing the product and its price (\$15).

MISSOURI PACIFIC.

Elegant Equipment Between Kansas City and Omaha.

On and after July 1, 1885, the Missouri Pacific night express, between Kansas City and Omaha, leaving Union depot at 8:20 p. m., arriving at Omaha at 6 a. m., returning leave Omaha at 9 p. m., and arrive at Kansas City at 6:35 a. m. daily.

The Maine bird catchers, who drive a thriving trade in native song birds, use a cage divided into four compartments. In one is a captive, which, when taken into the fields, utters a call to his wild brethren, one of whom is very likely, in flying about the cage to enter one of the open doors and set free a spring that shuts the door.

Fun Facts and Fiction.



A PAPER FOR THE PEOPLE.

Devoted to Society, Lodge, Amusement and Dramatic News, good Literature, etc. Will be published especially for the State of Kansas. Terms, \$2 a year; \$1 for six months. Specimen copy free.

The Line selected by the U. S. Gov't to carry the Fast Mail.

Burlington Route advertisement with logo and text: H&STJ & K.C. STJ & C.B. R.R.S

5,000 MILES IN THE SYSTEM, with Elegant Through Trains containing Pullman Palace Sleeping, Dining and Chair Cars, between the following prominent cities without change: CHICAGO, ST. LOUIS, DENVER, ST. JOSEPH, BURLINGTON, KEOKUK, ROCK ISLAND, COUNCIL BLUFFS, ATCHISON, LEAVENWORTH, SIOUX CITY, MINNEAPOLIS.

Over 300 Elegantly Equipped Passenger Trains running daily over this perfect system, passing into and through the important cities and towns in the great States of ILLINOIS, MISSOURI, NEBRASKA, IOWA, KANSAS, COLORADO. Connecting in Union Depots for all points in the States and Territories, EAST, WEST, NORTH, SOUTH. No matter where you are going, purchase your tickets via the "BURLINGTON ROUTE" Daily Trains via this Line between KANSAS CITY, LEAVENWORTH, ATCHISON, ST. JOSEPH and COUNCIL BLUFFS, OMAHA, SIOUX CITY, ST. PAUL and MINNEAPOLIS.

TILE & BRICK MACHINERY. STONE-SEPARATING CLAY-CRUSHERS. Illustrated Catalogue free. H. BREWER & CO., No. 146 Mill St., TECUMSEH, MICH.

ARTESIAN WELLS. Rock Drilling, Well Digging, Pipe Driving, Prospecting Machines and Outfits. GENERAL WELL SUPPLIES. MANUFACTURED BY NEEDHAM & RUPP, 27 West Lake St., CHICAGO, ILL.

Morton's Lightning Arrestor FOR WIRE FENCES. Preserves fences from damage and live stock and persons from being killed by lightning. Agents wanted. Address W. T. DAVIDSON, Abilene, Kas.

Prices Greatly Reduced for 1885. SAMPLE MONARCH POTATO DIGGER, Only \$10. SENT ON 60 Days' Test Trial. Agents Wanted. Liberal Discount to the Trade. Send for Wholesale Prices etc. MONARCH MFG. CO., 206 State St., Chicago.

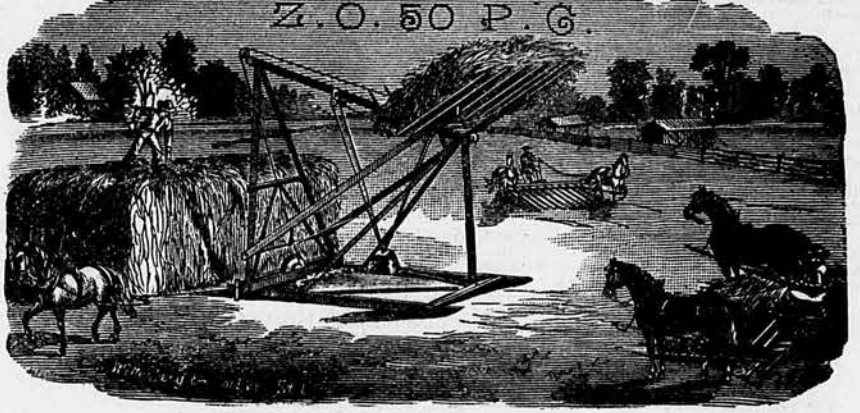
TIMKEN SPRING VEHICLES. OVER 400,000 IN USE. Easiest Riding Vehicle made. Rides as easy with one person as two. The Springs lengthen and shorten according to the weight they carry. Equally well adapted to rough country roads and fine drives of cities. Manufactured and sold by all leading Carriage Builders and Dealers.

ZIMMERMAN FRUIT & VEGETABLE EVAPORATOR. Made of Galvanized Iron. 5 SIZES. 16,000 SOLD. Economical, Durable and Fire Proof. Will pay for itself in 30 days use, out of sale of its own products. FREE! Our Illustrated Catalogue and Treatise. Address ZIMMERMAN M'FG CO., BURLINGTON, IOWA. AGENTS WANTED.

Columbus Buggy Co., COLUMBUS, OHIO. Largest Manufacturers in the World of Light Vehicles of Every Description. Warranted Strictly First-class Throughout. Stand the severest use. Absolutely reliable. Style and finish unequalled. Write for Catalogue and name of Nearest Dealer. Our sign—"COLUMBUS BUGGY CO.'S BUGGIES," in every town. Look out for it.

Ritchie's Safety Attachmen. FOR HORNED ANIMALS. Or Bull Conqueror. Pat. April 8, 1884. Entire Patent or Territory for sale. \$5 and \$5.50 per set. Sent to any part of U. S. on receipt of price. Circular and testimonials sent on application. Enclose stamp for reply. Address GEO. W. RITCHIE, Arrowsmith, Illinois.

"ACME" HAY RICKER, LOADER and RAKES.



AGENTS WANTED! The Greatest Money-saving, Labor-saving, Time-saving Hay Machinery Ever Invented. Twenty to forty acres of Hay put up in one day, at a saving of from 50 to 75 per cent. The hay is not touched with fork until on the rick in splendid shape for stacker. They make the farmer perfectly independent, even with a large crop of hay on hand, at a time when it is difficult to get reliable help, at great expense. THE ACME RICKER is always ready for work, eats nothing, never strikes for higher wages and is not subject to sunstroke. It builds Ricks or Stacks 20 to 25 feet high, and elevates from 300 to 1,000 pounds at one time. It is also the best and most complete Hay-loader on the market. These statements verified by thousands of the best farmers in the land. Write for Catalogue giving full particulars.

TOLL YOUR OWN CRIST!! "MANVEL" WIND ENGINE. SIMPLE, DURABLE, SELF-REGULATING, NOISELESS. STOCKMEN AND FARMERS CAN HARNESS THE WIND. AND GRIND ALL THEIR GRAIN with a machine without a cog, friction clutch, or ratchet, and at the same time Pumps all their water for Stock. FULL LINE OF PUMPS, TANKS, IRON PIPES & FITTINGS kept on hand. Parties requiring a Wind Mill should examine this machine, built for service, and write, stating the kind and amount of work they want done, to B. S. WILLIAMS & CO., (Limited), Atchison, Kas. (FACTORY, KALAMAZOO, MICHIGAN.)

ADAMS WIND MILLS. ARE BACKED BY A SPLENDID TWELVE YEARS RECORD. TIME-TRIED. + STORM-TESTED. (ALSO) READY MADE WIND MILL TOWERS, SQUARE, OR ROUND WATER-TANKS, IRON-PUMPS, BRASS PUMP-CYLINDERS, &c. Pamphlets, Circulars and Testimonial Sheets, Mailed Free. MARSEILLES M'FG CO., Marseilles, La Salle Co., Ill., U.S.A.

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

Sedgwick STEEL WIRE Fence. It is the best general purpose wire fence in use. It is a strong net-work without barbs. Don't injure stock. It will turn dogs, pigs, sheep, and poultry, as well as horses and cattle. The best fence for Farms, Gardens, Stock ranges, and Railroads. Very neat, pretty styles for Lawns, Parks, School-lots, and Cemeteries. Covered with rust-proof paint, or made of galvanized wire, as preferred. It will last a life-time. It is better than boards or barbed wire in every respect. Give it a fair trial; it will wear itself into favor. The Sedgwick Gates made of wrought iron pipe and steel wire, defy all competition in lightness, neatness, strength, and durability. We make the best, cheapest, and easiest working all-iron automatic or self-opening gate, and the neatest cheap iron fences now made. The Boss forking poultry coup is a safe and useful invention. The best Wire Stretcher, Cutting Pliers, and Post Augers. We also manufacture Russell's excellent Wind Engines for pumping, and Geared Engines for grinding etc. For prices and particulars ask Hardware Dealers, or address, mentioning paper, SEDGWICK BROS., Richmond, Ind. IT WILL BE AN ADVANTAGE to always mention the KANSAS FARMER when writing to advertisers.

PATRONIZE HOME INSTITUTIONS. THE SOUTHERN KANSAS RAILWAY IS A KANSAS ROAD, And is thoroughly identified with the interests and progress of the State of Kansas and its people, and affords its patrons facilities unequalled by any line in Eastern and Southern Kansas, running THROUGH EXPRESS trains daily between Kansas City and Olathe, Ottawa, Garnett, Iola, Humboldt, Chanute, Cherryvale, Independence, Winfield, Wellington, Harper, Atchison, and intermediate points. THROUGH MAIL trains daily except Sunday between Kansas City and Wellington, and intermediate Stations, making close connections at Ottawa, Chanute and Cherryvale with our trains for Emporia, Burlington, Girard, Walnut and Coffeyville. ACCOMMODATION TRAINS daily except Sunday between Kansas City and Olathe and Ottawa. REMEMBER that by purchasing tickets via this line connection is made in the Union Depot at Kansas City with through trains to all points, avoiding transfers and changes at way stations. THROUGH TICKETS can be purchased via this line at any of the regular Coupon Stations, and your baggage checked through to destination, East, West, North or South. PULLMAN SLEEPERS on all night trains. For further information, see maps and folders, or call on or address S. B. HYNES, Gen'l Passenger Agt., Lawrence, Kansas.

TWO-CENT COLUMN.

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

READ THIS.—Fancy-colored Rabbits for sale. Address Joe Shellabarger, 123 Harrison street, Topeka, Kas.

EXTRA BARGAINS.—Five extra Yearling Short-horn Bulls for sale cheap. L. A. Knapp, Dover, Kansas.

FOR SALE.—A choice high-bred Rose of Sharon Bull, to head herd. Address Willis Pope, Lincolnville, Kas.

V. B. HOWEY, Box 103, Topeka, Kas., breeder and shipper of Thoroughbred Poland-China Swine. Recorded in Ohio Poland-China Record. My breeders are second to none. Write for what you want.

ELECTRIC CONDUCTOR FOR WIRE FENCES.—With a lateral collector on each wire and perpendicular conductor, with ground attachment, it effectually protects wire fences, live stock and persons from being killed by lightning. It strengthens the fence, and avoids the necessity of using so many posts. Patented May 12, 1885. Agents wanted. Address Dr. Chas. Williamson, Washington, Kansas.

S. V. WALTON & SON,
Box 207, Wellington, Kansas,
—Breeders of—

IMPROVED POLAND-CHINA HOGS
Of the Highest Type.
All well pedigreed. Correspondence solicited

EMPIRE BREEDING FARM,
G. M. EMBICK, M. D., Brookville, Ill. 18 Holstein Friesian Bulls, 100 Victoria Pigs for sale at living rates; now is the time to procure choice stock. 30 varieties of Fancy Poultry. Write for what you want. JAMES FAGER, Manager

Pioneer Herd of Holstein Cattle
—AND—
DUROC JERSEY SWINE.



For beef, butter, and cheese, breed **HOLSTEINS.** For largest return on money invested in swine, breed **DUROC JERSEYS.** Choice registered animals for sale by **WM. A. GARDNER,** Oregon, Mo. Correspondence solicited. When writing mention this paper.

PLUM GROVE HERD OF Premium Short-Horns!

AT PUBLIC SALE,
Wednesday and Thursday, July 29 and 30, '85.

The undersigned has determined to offer his entire herd of **SHORT-HORN CATTLE** at Public Sale, on the above date, at his place, two miles west of West Liberty, Iowa. The offering will comprise about 150 Head, including

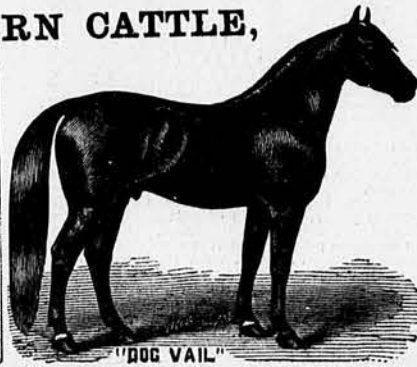
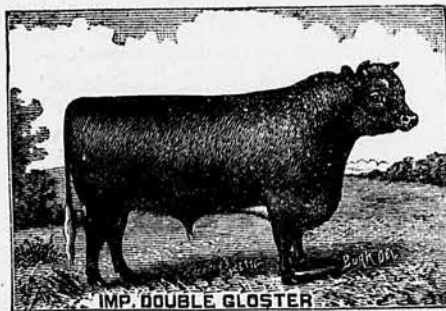
23 HEAD OF PURE CRUICKSHANK CATTLE, ALL HIS FINE SHOW CATTLE,

And the choice breeding Cows which he has secured by years of careful selection. None of the animals will be sold at private sale, and every one catalogued will be in the sale unless out of condition at that time. Catalogues now ready. All letters concerning sale, catalogues, etc., should be directed to

JAMES MORGAN, West Liberty, Iowa.
ROBERT MILLER.

Col. J. W. JUDY, Auctioneer.

BLUE VALLEY HERD and STUD OF SHORT-HORN CATTLE,



Such as Cruickshanks, Roses of Sharons, Young Marys, Phyllises, Josephines, and other good sorts. Also

Roadster, Draft & General-Purpose Horses, Mares & Mules.

Stock always in fine condition and for sale at reasonable prices. Correspondence and inspection invited. Call at the **Blue Valley Bank, Manhattan, Kansas.**

WM. P. HIGINBOTHAM, Proprietor.

HEREFORDS!!



Important information for the breeders and stockmen west and southwest of the Missouri river! 60 acclimated imported

Hereford Bulls for Sale!

They represent blood of Horace, Lord Wilton, The Grove 3d, and other prize-winning sires. Thirty 18 months to 2 years; thirty 14 to 18 months old. Selected from best herds in England. Recorded in A. H. R. or eligible and entered for record in Vol. V. Illustrated Catalogues. **G. E. HUNTON,** Breeder, Abilene, Kansas. (U. P. Ry., 163 miles west of Kansas City.) May 1st, 1885.

THE ELMWOOD HERD

—OF—
A. H. Lackey & Son,
PEABODY, Marion Co., KAS.,
BREEDERS OF

SHORT-HORN CATTLE

AND
BERKSHIRE SWINE.

Our herd numbers 130 head of well-bred Short-horns, comprising Cruickshanks, Rose of Sharons, Young Marys, Arabellas, Woodhill Duchesses, Lavinias, Floras, Desdemonas, Lady Janes and other good families. The well-known Cruickshank bull **BARMPTON'S PRIDE 49854** and the Bates bull **ARCHIE HAMILTON 49792** serve our herd. We make a specialty of milking Short-horns, the Arabellas being specially noted as milkers. Good, useful animals of both sexes always for sale. Premium Berkshires very cheap.

Hart Pioneer Nurseries,
[Established, Dade Co., Mo., 1857; Ft. Scott, Kas., 1865; Incorporated, 1884.]
FORT SCOTT, : : KANSAS.
A full line of Nursery stock, all warranted true to name. No substitution of varieties to our purchasers. Reference: Bank of Ft. Scott. For other testimonials see our catalogue.

The AULTMAN & TAYLOR

THRESHING MACHINERY!

PATENTED BY AN AULTMAN-TAYLOR STEWART



The Most Reliable in the Market! The Most Durable in the Market! No other Separator will Thresh the Grain as Clean None other will Save as Much Grain for the Farmer!

It is called the "Starved Rooster Thresher" because it puts the grain in the half bushel instead of the straw-stack, and leaves none in the straw-stack for chickens to fatten on as is the case with other Threshers.

Owners of Aultman & Taylor Threshers make more money than the owners of any other Machines: Because they can always have the preference of jobs: because they can obtain better prices for their work; because they can thresh grain in all conditions, when other machines cannot; they have less expenses, less detentions, less breakages, for the machinery is durable and strong. In the case of steam rigs, farmers feel safer in employing an Aultman & Taylor Engine than any other, for they are built strong, and are safe; they do not wish to employ new and untried Engines; they want the "old reliable" Aultman & Taylor, that has stood the test for years.

Threshermen, See the New Improvements for 1885!

On Separator and Engine, which places this machinery still further in advance of all competitors. The light-running, double-gear Aultman & Taylor Horse Power is also kept ahead. The durability of this Machinery (as well as its good work) is the most wonderful of any Threshing Machinery ever made. Amongst the many instances of durability, would refer our customers to M. A. & W. W. Wisecarver, of Kellighy, Butler county, Kas., to whom we last fall sold a new Separator to replace an old Aultman & Taylor Separator that was bought fourteen years ago and has been run every season since!

We can refer to a number of parties who bought Aultman & Taylor Machines when we first came to Kansas City, twelve or thirteen years ago, and are still running them. Can any other machine show such a record? No. Is not the Aultman & Taylor the cheapest to buy; even at 50 per cent more money than other Machines? Yes, but they can be bought at same price as other so-called first-class Machines. Are not the greatest bargains in Threshing Machines in this country to be had in the Aultman & Taylor? Yes.

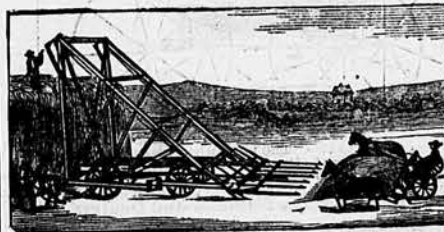
Call on our Agents for Descriptive Pamphlets, Price Lists, etc., giving the liberal terms offered on this Machinery, or send to us direct.



TRUMBULL, REYNOLDS & ALLEN,
General Western Agents, **KANSAS CITY, MO.**

THE DAIN IMPROVED AUTOMATIC HAY-STACKER and GATHERERS!

The Greatest Labor-saving, Money-saving, Time-saving Machinery Ever introduced on the Farm or Ranch.



Will save 50 to 75 per cent. In the cost of putting up hay over the old way. Does away with the hard labor of putting up hay; hay not touched with a fork from the time it leaves the mower until it is on the stack; is put up better than it can be done by hand, so that hay keeps better and is worth more. The cost of a Stacker and two Gatherers saved in putting up every seventy tons of hay! No farmer or ranchman who puts up hay can afford to be without it. Makes a farmer independent. One man, three boys and five horses will do the work of ten men and six horses. Send for Descriptive Circulars and Price Lists.

TRUMBULL, REYNOLDS & ALLEN,
(Manufacturers) Kansas City, Mo.

Vehicles for All Kansas and the Southwest!
BRADLEY, WHEELER & CO.,

Manufacturers' Direct Distributing House for



Wagons, Carriages, AND Farm Machinery,

INCLUDING
The Old Reliable **Schuttler Wagon,**
The Celebrated **WATERTOWN SPRING WAGONS.**

BUGGIES OF EVERY STYLE AND GRADE.

Concord Buggies, Buckboards, etc. Garden City Plows and Cultivators. Bradley Mowers and Rakes. All goods sold under our own name and guarantee! Catalogues and full information promptly furnished. Inquiries or visits solicited from every body.

CORNER 10th AND HICKORY STS., (Near Union Depot on route to Stock Yards), KANSAS CITY

WOOL!

LUCAS & WYNN,
Wool Commission MERCHANTS,

221 and 223 } **CHICAGO, ILL.**
Kenzie street, }

Consignments solicited. Sacks free to shippers. Cash advances made. Reliable market reports furnished. Information cheerfully and promptly given on application.



STEWART'S HEALING POWDER,
CURES ALL OPEN SORES, CUTS FROM BARBED WIRE FENCE, SCRATCHES, KICKS, CUTS, &c.
Sold Every-where. 15 & 50 cts a box. Try it!
STEWART HEALING POWDER CO., ST. LOUIS

Self Cure Free
Nervous Debility, Lost Manhood, Weakness and Decay. A favorite prescription of a noted specialist (now re-ferred.) Druggists can fill it. Address **DR. WARD & CO., LOUISIANA, MO.**
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