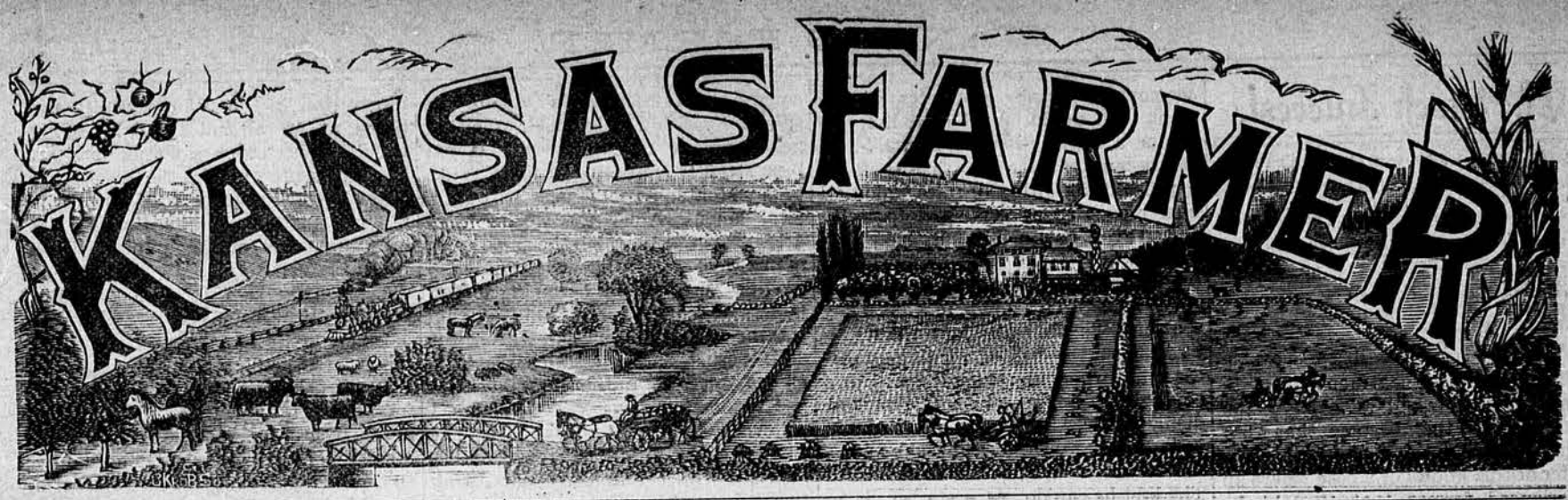

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ABOUT WHEAT-SEEDING.

A good deal has been said in these columns recently on this subject, and a good deal more can be said and will be said on the same matter. Below we present the views of a Pennsylvania farmer, as given in a prize essay recently published in the *National Stockman*, at Pittsburgh, Pa. Kansas and Pennsylvania are very unlike in many respects, so that what may be good culture in one of them may not be in the other. But there are certain foundation principles in farming that are applicable everywhere, and we submit this essay for what there is in it that is good on general principles. It was written by R. D. Wylie, of Washington, Pa.:

The subject assigned for this essay naturally divides itself into two parts; the one having reference o the *mode* and the other to the *time* of sowing. The writer inverts the order as given by the editor, and will consider, first, the time to sow wheat. In dealing with this question a number of elements enter into its consideration. Of these the latitude of the land to be seeded, the condition of the soil in respect to moisture, a previous crop occupying the land, or the fear of the ravages of the Hessian fly, may, any one of them, determine the best time to sow wheat. The writer will confine himself in this essay to sowing winter wheat. The greater part of the winter wheat is grown inside of the parallels of latitude 39 to 42 deg. north. Owing to the early advance of winter in the northern latitude named, it is necessary to sow early in order to give the wheat plants time to make root-growth before freezing weather sets in. Sometimes continued dry weather, by which the ground is baked dry to the depth of furrow, prevents seeding at the time, when, the condition being otherwise, it would be best to put in the wheat. In many sections of the wheat belt corn ground is seeded to wheat, and because the corn is not ready to take off, the wheat cannot be put in as early on that account.

But by far the most important factor entering into the decision of the question as to when to sow wheat is the fear of the ravages of the Hessian fly, called by the entomologists *cecidomya destructor*. It is believed that this insect was introduced into this country during the war of the Revolution, by the Hessian soldiers from Hesse, in Germany, who were hired by the British. The fall hatch of this insect makes its appearance over the wheat-growing region from the 1st to the 10th of September. It is a two-winged fly, almost black in color, and quite small, having a spread of wings of only one-fourth of an inch. If, when it appears, the wheat is up, it deposits its eggs on the young blades. As soon as hatched, the young larva goes down between the leaf and the stem of the plant, near the first joint at the surface of the ground. Here it remains, if undisturbed, and feeds on the juice of the plant. If any considerable number are in one plant, they exhaust its vitality, and the plant turns brown or rusty and makes little or no growth. The writer has found as many as ten within the sheath at base of one plant. The period of its larval or maggot growth continues for about six weeks, after which it goes into the chrysalis state, in which it remains until spring, when it hatches into the perfect insect, ready to lay eggs, as in the fall. As in the case of most insects injurious to vegetation, so here the damage is done solely during the larval state. The perfect insect or fly is very frail, and is readily destroyed by cold or rainy weather. Herein is found the farmer's almost only hope of relief from its ravages. By delaying the sowing until from the 12th to the 25th of September, the probability is very much lessened that the Hessians will be present in sufficient numbers to hurt the wheat when up. For various reasons, the writer formerly aimed to get his wheat in during the first week in September, but, on account of the serious damage to the crop for several years by this little insect, has a very decided preference now for a later date, or some time between the 12th and 25th of September. A few years ago, the writer seeded about seventeen acres to wheat on the 1st and 2d of September. Part of this tract yielded only six bushels to the acre, and the balance about ten bushels. The small yield was undoubtedly due to the injury done by the larvæ of this fly. Other conditions were favorable. The maggots could be seen in large numbers in the stalks. The plants became rusty in the fall and made little or no growth. Those that survived the winter made poor growth, with little stooling out during the spring, and at harvesting were much straw-broken and poorly filled. On an adjoining field the year preceding, with later sowing, the yield was thirty bushels to the acre. The Hessian fly is one of those pests for which there seems to be no remedy. They are less likely to attack the plants on low and moist land than on high and dry locations. Those varieties of wheat that have a hard, stiff stalk, and that stool out freely, seem to be less subject to its attacks, or at least withstand them better. With the great increase in the fertility of the soil in the region where the writer lives, due largely to sheep husbandry, and also with the marked improvement in plows and other implements, by which the soil is put in proper condition for seeding, it is quite possible to put in the crop at the dates given, and still secure a strong, vigorous growth of the wheat plant before winter comes on.

Another consideration bearing on the question "When to Sow Wheat" is the fact that for several seasons back the weather has been quite warm in September and October, and when there has been any considerable quantity of rain, the early-seeded wheat on rich land made too large a growth, in fact almost developed the stalk as seen before shooting. This growth makes the plant tender, and it is very apt to be injured by the freezing that follows. The writer's rule is to put in the wheat as soon in September as there is probability that the danger of the fly is past, and other conditions being favorable; or, to be more definite, in this latitude, 40 deg. 15 min., at dates given above. But another matter must also be borne in mind, viz: if the ground is so dry that it is probable that all the wheat will not come up, then it is better to wait until sufficient rain comes to make it certain that all will come up. If the ground is very dry and then light rains fall, it is still uncertain about securing a good stand, as the seed may germinate and then perish for want of sufficient moisture. This condition is quite apparent when the plants show a yellow, withered appearance in the fall. Yet here the writer would thoroughly emphasize the fact that it is quite true that, with the ground thoroughly pulverized, a given amount of moisture may be subservient to secure germination and growth of the plant, when the same amount would not suffice for the purpose should the ground be lumpy and coarse. Indeed, it is possible to succeed with less moisture than many would suppose, provided that the soil is thoroughly pulverized to the depth of the furrow and packed down firmly with the roller. This mechanical condition of the soil is calculated to receive and hold all available moisture, (at the time it is needed), as well as to retard evaporation by its compact surface.

A few years ago the writer on meeting a neighbor farmer remarked to him, "It is too dry to sow wheat now." The neighbor remarked, "Well, I am sowing away. I keep the harrow and roller going over and over again, until I get the clods all crushed and the ground thoroughly pulverized, and then drill." He was getting the benefit of all the available moisture in this way. His land was north-lying land, which admits of sowing sooner in dry weather, as the evaporation is not so rapid. The crop was a success. His forty acres yielded him over 1,000 bushels. It is only fair to add that the writer waited that year until the rains came in the first of October and then seeded. The crop made an average of only eighteen bushels to the acre. It was a little too late, and the plants did not have time to make a good growth in the fall.

I would sum up as to "When to Sow Wheat" in more general terms, thus: I aim to sow when I believe all the seed will germinate, and when the surrounding circumstances favor the growth of a vigorous plant. A vigorous plant of moderate growth and lying flat on the ground, is much preferred to a large growth of plant standing upright at beginning of winter. In order to secure a full yield afterwards it is necessary to have a good, even stand. However much a large yield may be dependent on other conditions this is an essential one.

PART SECOND—HOW TO SOW WHEAT.

The writer proposes to treat this part of the subject under two heads, viz.: (1) The Preparation of the Soil, and (2) The Sowing.

The preparation of the soil includes the plowing, harrowing, and whatever other operations are necessary in order to put it into proper condition for the seed. If the ground to be plowed is a stubble field, and is in good condition to plow as soon as harvest is finished, it is generally best to go on with it at once; as it often happens (at least in the section where the writer lives) that the last half of August is very dry, and on that account land becomes very hard to plow. When it is baked dry, in addition to the greater labor, it generally plows up lumpy, which condition makes work afterward. Where it is an oat stubble that is to be seeded to wheat, if any considerable quantity of oats is on the ground it is better to have this sprouted before plowing it under. It may be necessary to harrow the stubble with an Acme, spring-tooth, disk, or some other kind that will cover the oats to some extent, and so hasten the sprouting. A growth of oats in the wheat is a direct injury to it and no benefit whatever, as it grows faster than the wheat and weakens it by crowding and shading.

PLOWING.

The writer assumes that in the case of whatever crop that may have preceded, the plowing and other preparations were well done. This being the case, it makes it easier to do thorough plowing for the wheat, which, at all events, *must be done* if a full yield is sought. By good plowing is meant the thorough and even turning over and consequent pulverization of every foot of soil to be sowed in wheat. In order to make good plowing it is necessary to have a team possessed of sufficient power to turn over readily a furrow ten inches in width and at least six inches in depth, a plow that will stay down, keep clean in all soils, and having such a mold-board as to lay the furrow evenly on the whole round; and the last essential is to have a good, steady man in charge of the work. A chilled plow, equipped with jointer and wheel, is the best in plowing for wheat. The wheel steadies the plow, regulates the depth of the furrow, and saves the team and the point. The jointer effectively turns under stubble and any green trash out of the way of the harrow and drill-hoes.

It is important to have the plowing done some time before sowing, in order that the soil may settle down, and so make a firm and compact seed-bed. This kind of seed-bed is favorable to a good growth of plant, and so of a good yield subsequently, for two reasons: First, the seed-bed being compact and firm underneath, has a tendency to cause the plant to make a lateral or horizontal growth, rather than a downward one. The benefit derived from this is that in freezing and thawing the roots are not so much injured, as it is only the surface that expands or lifts up, and the shallow or horizontal roots lift up without breaking off. Where the roots go deep into a loose, porous soil, they are broken off in the freezing operation, and the vitality is thereby very much, if not fatally, impaired. This, I think, is the main reason why corn ground that is seeded to wheat without plowing, by simply harrowing or cultivating the surface, often makes a good yield. The second reason is that at the time of freezing weather it does not so readily receive and take up so much surplus moisture, which, by alternate contraction and expansion in freezing and thawing weather, injures the roots of the plants more or less. Where it is practicable wheat land should be plowed in large pieces rather than in lands, as the dead-furrows or land-marks are objectionable, and the fewer of them the better. A land-mark can and should be remedied, after the piece is finished, by plowing over towards it a couple of furrows from each side. Another help is to give them an extra coat of manure on top, and then cross them in harrowing.

HARROWING.

If the plowing has been done in a proper manner, the harrowing is a much easier task. Whatever harrow is used of the many excellent ones in use, the work should be done soon after plowing, so that the soil will not be baked dry. Evaporation goes on rapidly from the rough, porous surface left by the plow. If the land is harrowed down smooth and compact soon after plowing, while yet moist, it has the effect of both retaining the moisture and retarding evaporation, besides being much easier done then. Harrowing should go on until the whole soil is disintegrated, or separated into fine parts, to the depth of the furrow. I can see little or no use for clods in a wheat field, but if they are there, I want them to be small, and on top of the ground. Here they are not generally objectionable, and where there is severe freezing with wind while the ground is bare, may shelter the plants somewhat, and mouldering down by the action of the frost, often cover roots that are exposed by freezing. A large clod, however, will crumble down and smother the wheat.

(*Concluded on page 4.*)

The Stock Interest.

PUBLIC SALES OF FINE CATTLE.

Dates claimed only for sales advertised in the KANSAS FARMER.

October 30—Ed. K. Rea and Walter C. Weedon & Co., Galloways, Kansas City, Mo.
November 3 and 4—Inter-State Breeders' Association, Short-horns, Kansas City, Mo.
November 5—S. E. Ward & Son, Short-horns, Kansas City, Mo.
November 5—Shockey & Gibb and W. E. Campbell, Short-horns, Kansas City, Mo.

Another Word About Hog Cholera.

The more experience men have with what they usually call hog cholera, the better satisfied they become that they do not know anything about it. The writer of this knows of a case where an experienced farmer that thought he knew enough about raising to take care of them when he had them, was induced to sell all he had because in at least two separate periods he lost hogs by what he believes was cholera, and yet, in both cases he gave a certain remedy to some of the hogs and they got well.

There is a great deal yet to be learned about diseases of human beings, and quite as much about those of inferior animals. It is said, we all say it, and very properly, too, that in all cases it is best to follow nature as nearly as possible; yet, what do any of us know about the diseases of hogs or of any other animals in a wild state? We do not treat any animal like its ancestors were treated when running wild. The wild hog, for instance, never eats corn, and often days at a time he has nothing but roots and dead leaves to eat. It has no shelter except such as it finds or makes for itself. Nor does it make its bed in mud, nor live perpetually in a quagmire. The wild hog, when seen, is nearly always clean, and lives most of his time on high and dry ground if it is within his reach. Still, we know nothing about what diseases affect him, if any do.

Another thing about diseases and remedies. Take the same person ailing at different times with disease that his physician calls by the same name, and it will be found that the treatment varies more or less in every case. The same person, the same disease, the same physician, yet the treatment different. It is reasonable enough when we think about it a moment. There was some difference in the circumstances at the different times, and the differing conditions were ascertained by answers of the patient to questions of the physician. He could tell all about the history of himself while the disease was coming upon him. He could describe his manner of life, tell where he had been, under what circumstances and what he was doing; he could tell what he had eaten and drank, where and when; he could describe the temperature, the nature of the weather; in short, the patient can tell all about his case in response to questions that his present condition suggests, and because of the information so afforded the treatment is not the same that it was in a similar case attended by or preceded by different conditions.

With animals, however, the farmer has not such advantages. He does not know all the operating causes of the particular disease that he undertakes to treat. So ignorant is he and because, from the nature of the case it must be so, he sometimes wholly mistakes the disease. The dumb beast cannot tell him anything about its case, nor when it first felt unwell, nor where or under what circumstances. It can cough, it can void excrements, it can lie down, but it cannot explain anything, nor is it expected to try. Except that it can move and does move, and that certain movements are believed to follow or accompany certain character of ailment, one might about as well try to doctor a shaving-horse or a metal pig. It is because of these facts that we advise a prudent following of rules which all men recognize as conducive to health and to avoid as much as possible everything which is known to produce disease. These are preventive measures. As to remedies, nature points out many that may be used all along the way—remedies in the way of warding off disease; but when an epidemic comes or a contagious disease and hogs sicken and die by hundreds, the way of the owner is dark, indeed, because he really knows so little about what he has to deal with. The best he can do, as a starter, is to get the well hogs away from the sick ones, protect them well from inclement weather and all unhealthy influences that he knows of or suspects, change food, and trust to luck for the rest.

Because of the difficulties before mentioned, men sometimes are discouraged. They say they followed all the rules laid down by writers on the subject, still they lost hogs. There are some well-recognized conditions of health among animals as well as among men. There are often some subtle circumstances that we do not detect, or some operating conditions that we do not recognize. Hence our failure. Let us do the best we know how, using our best judgment in doubtful cases, and we will fare reasonably well in the end. Give hogs plenty of room, keep them in healthy quarters on high ground, feed nutritious and wholesome food in regular methods, let them have salt, lime, clay, ashes, and grass and vegetables whenever practicable.

Sheep on the Ranch.

The subject of sheep-raising and its profits is treated by a practical farmer in the *Rocky Mountain Husbandman*, and his remarks are applicable to Colorado as well as Montana. He says: "It gives me much pleasure to write a few encouraging words to the wool-growers of our Territory, and to confirm the reports which they have already received from the East of an active and increasing wool market. The situation of the wool and woolen goods market is almost identical with that of 1879. It will be remembered that the financial depression which began in 1873 terminated in the spring of 1879. For a period of five years the decline continued in wool and woolens, until both had reached a point—especially woolen goods—lower than had ever been known in the country. Unwashed wool opened at 15 cents a pound in Minnesota and Wisconsin, and 18 cents in Montana, in 1879. An improvement in value throughout the country having set in at that time, wool rapidly advanced until our best clips sold in Boston during the winter of '79 and '80 at about 46 cents a pound. The winter of '84 and '85 will long be remembered by woolen manufacturers and wool-growers as one of great depression. Woolen goods were lower than in the winter of '79, and many mills had practically stopped producing. All at once, within the past few weeks, merchants discovered that the supply of woolen goods was short. Orders have been rapidly placed, and now the mills are crowded with work. This, of course, has created a sharp demand for wool, and prices are advancing rapidly. It is to be regretted that the wool-growers rather than the wool dealers should not get the advantage of the advance on this clip; but the wool-growers of the West can be assured that the tide turned in the business and that they are certain to be paid for holding on their sheep interests during the depression of the past two years. The wool-growers of Montana can also congratulate themselves upon the splendid position which their wool has gained among manufacturers. It has been steadily increasing in favor, until to-day Montana wool stands without a rival among American wools. The great advantage which the superiority of our wool gives to the sheep industry of this territory is becoming better understood and assures for it a substantial and rapid growth. During the dark period through which we have passed, my faith in the sheep business in Montana has never weakened, and I believe to-day, as I always have since I first came to the Territory, that Montana will, before many years, rank as the first wool-producing State in the Union, and will be second only to Texas in the quantity produced. The sheep owner who is diligent in his business, builds ample sheds and carries hay sufficient for the hard winter that is sure to come, can depend upon good profits for a term of years, and need not fear great losses in any winter. Many object to the sheep business because, to produce first-class results, there must be hard work and close attention to it during many months of the year. Are the requirements for success in this business greater or more imperative than in any other branch of business except the cattle business on the plains? I notice the business men here in the East work more hours and are burdened with far greater cares than are Montana flock-growers, while their pecuniary compensation is much smaller for the capital invested. Men whose cattle depend entirely upon range grass for subsistence, and who apparently have nothing to do, after all, get their full share of mental wear and tear during the stormy periods of winter, when the sheep owner, looking to his sheds and hay stacks, feels that his flocks are safe from danger. The future for the sheep business in Montana is, in my opinion, exceedingly bright for many years to come, and those who are established in the business and understand the management of their flocks, cannot make as much money from a like investment in any other branch of stock-raising."

Hogs Following Feeding Cattle.

"It has probably not occurred to the minds of many farmers who fatten their swine by allowing them to follow cattle that are full fed on corn, that possibly the hog meat, designed for use in their own households, would be the better if made from different food." So the *National Live-Stock Journal* says, and then, it gives some suggestive reasons for making the statement. "The excrement of an animal," it says, "contains whatever of vitiated secretion, or foul accumulation, nature aims to remove from the inner organs for the animal's good. If these accumulations remain in the body beyond the limited and proper time, the body takes harm. Now, the hog that gets his supply, in whole or in part, by following the ox fed on corn, while it is the corn only that he seeks, he nevertheless misses nothing that the ox casts off, and, as stated, what would be damaging to the health of the beast and to the quality of his meat if retained. It cannot rightfully be said that this statement is too highly colored, because we want the naked facts, stripped of all money considerations, when considering the question of food supply.

"It is needless to fall back upon the inherent powers of digestion to sift the good from the bad, using whatever is good and rejecting the bad. The digestive forces have no such powers of discrimination, and if they had, would be powerless to separate. We have an illustration in the color given to the bones of an animal through feeding madder, or other coloring matter. Blood poisoning follows the absorption of the liquid portion of fecal matter if retained for too long a time in the intestinal tract of the animal within whose body it forms. In the case of the pig that eats fecal matter, the opportunities this has for entering the blood are materially greater than in the other case, as it passes through that portion of the canal devoted especially for taking up and transferring to the blood whatever is capable of being taken up. This process goes on, mainly above the point where fecal matter is formed, hence there is but little if any restriction to taking up and sending into the blood the offensive secretions the ox gives off, which the hog takes in.

"We do not claim that the dreaded *entozoa*, trichinæ, is engendered in the hog through eating foul refuse, as its origin is not clearly known; but, nevertheless, it is well known that bacteria have their origin through a very simple process—fermentation—and that between the conditions, fermentation and putrefaction, no clear line of division can be drawn. As our information regarding the production of disease, through the agency of living organisms, is added to, heed should be given to any facts that point to the possible entrance, needlessly, of living bacteria in the food given to animals being reared and fed for their flesh. In this connection, from what source do bacteria arise more rapidly than in the excrement of the highly fed cattle beast? Fermentation takes place very soon after the ejection of the *fœces*, and these bacteria, not more than 1-10,000th of an inch in length, are produced in cattle dung in immense numbers. Putrefaction occurs quite early in the ejected *fœces* of the ox, and while, as stated, the line of demarcation between the organisms engendered in a fermenting mass, is not clearly outlined to the satisfaction of all, yet we have reason to suspect the outgrowths from putrifactive cattle dung, as this contains vitiated animal mucus and disordered biliary secretion—the natural outgrowth of a system of high feeding. Therefore, we venture to suggest that, for the farmers and cattle feeders own use, the associations connected with eating pork will be more agreeable if it be clearly known that the family supply of pork has been taken from swine that had their food, so to speak, at first hands."

In a dry spring the English farmer feeds off his wheat by sheep, in order to put it back and strengthen it.

A potato that has eyes that show no fullness and are small, is unfit for planting, no matter what its form and size.

A Vermont dairyman says a young calf should be fed three times a day. Overfeeding at long intervals, and especially with cold food, kills a good many valuable calves.

The Memphis *Appeal* says flour made of peanuts is coming into notice. It makes a delightful biscuit and very rich pastry.

Mr. Thomas Action, a Long Island farmer, says he has sown rye all the way from July to December, and has had good luck with it in making spring pasture.

After all, there is a vast deal of common sense in the remark of the deserter when he said: "I'd rather be a coward all my life than a corpse fifteen minutes."

Shipments of comb honey have been successfully made to Europe, and it is expected that this fact will open up a new and remunerative market for this product.

Small boy—Pa, when they install a minister, do they put him in a stall and feed him? No, my son, they harness him to the church, and expect him to draw it alone.

Breeding From Small Mares.

This journal has often spoken against the practice of breeding small mares to large stallions. Our attention is again called to the subject by an article in the *Canadian Breeder*, entitled "Concerning Cob Breeding." Cob is an English term applied to small, short-legged horses. "Size always tells in a horse's favor, where other things are equal," the *Breeder* says, "and the farmer who has a small mare is very apt to think he can better himself by breeding her to a big horse. And yet this practice is of a certainty lowering the character of our horses and prejudicing the interests of the Canadian horse-breeder in the markets of the world. Our farmers do not appear to know anything about the value of really high finish and quality independent of size. They do not seem to know that there is a market for cobs because they seldom or never breed one. Take for example a man with a snug, compact, little mare, fifteen hands high, or even under that mark, and weighing perhaps 900 pounds. Should he breed such a mare to any handsome and compact thoroughbred horse standing on short legs (such as Springfield, Strachino or Day Star), and he could hardly fail to get a stout, stylish cob, full of quality and courage, having good bone, pace, and action, and being up to almost any weight. But in nineteen cases out of twenty he will not do this. He will be far more apt to breed his little mare to some big Clydesdale or Shire horse seventeen hands high, weighing a ton or more, and as dull and stupid as he is big. Perhaps the foal may, by a strange freak of nature, closely resemble the sire in most respects, and when three or four years old sell for a good strong price to some one who is willing to pay a strong price for size and weight independent of all other qualities. On the other hand, however, the small capacity of the little mare is apt to cramp and starve the foetus ere it sees the light. It is foaled a big, raw-boned, ungainly colt; and, as the little dam has not nourishment enough for him, the youngster continues as he was foaled, the big frame which has the first claim on his sustenance being built up at the expense of the muscles, which are attenuated, weak, and flabby. Every farmer in Ontario has seen many just such horses as the colt we are describing will grow up to be, and unfortunately for us, buyers from the United States and the other side of the Atlantic have seen them too.

"But if the farmer contrives to steer clear of the draught horse, he is almost sure to fall foul of the trotter. In this he is more apt to succeed in getting a good animal, and, of course, he may strike a bonanza. Much depends on the character and breeding of his mare. If she happens to have trotting action and fairly good breeding she may nick finely with a well-bred trotting stallion, and if the union does not produce a trotter, it will be very apt to produce a thoroughly good roadster. If, however, the mare be inclined to be sluggish or cold-blooded, the propriety of coupling her with a trotting stallion would be very questionable. The thoroughbred would make a much safer cross, and should the produce be a filly, she would ultimately grow into an admirable mare upon which to cross a trotting stallion. Such mares are just what our farmers need if they wish to be successful in the production of trotting horses."

Twenty years ago the English House of Commons contained only two teetotalers; at present it has thirty-six.

Tobacco leaves, or tobacco in most any form, placed in the bottom of the nest of a sitting hen keeps the lice away.

"Detached" dog collars are the latest feminine folly. The dogs wear them in the morning and then they are "detached" and worn by the ladies in the afternoon.

Speaking of a commercial traveler who was arrested for embezzlement, an exchange says: "He confesses his guilt." A drummer may own up to guilt, but to brass—never.

E. L. Sturtevant says the great drawback to obtaining satisfactory yields of corn comes from slovenly culture, not only in operations in the field but from careless planning by the farmer.

The value of farms, including fences and buildings, in the United States in 1880, was $10,177,000,000. In 1860 it was $6,645,000,000, an increase not quite equal to the increase in population.

The rose said to the lily: "Thou must bow
Thyself in holy reverence to me;
For it is I, about whose scented brow
The purest love is twined so graciously."
The lily said: "To me is beauty given—
Love is thine altar, innocence my shrine—
Death stole my blush, and adding it to thine,
Hath fitted thee for earth, and me for heaven."
The poet said: "Sweet sisters, oh, be still;
To each of thee was given a separate birth,
To each a separate and an envied worth.
Then bloom both rose and lily; bloom and fill
The air with all your purity and love;
Earth's harmony, oh, rose, fair lily, life above."
—*Tapley.*

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.

J. M. BUFFINGTON, Oxford, Kas., importer and breeder of Norman and Clydesdale Horses. Twelve Imported and Grade Stallions for sale.

M. D. COVELL, Wellington, Kas., for fifteen years a breeder and importer of Percherons. *Stud Book and High-grade acclimated* animals, all ages and both sexes, for sale.

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.

CATTLE.

WALNUT PARK HERD—Pittsburg, Kas. The largest herd of Short-horn Cattle in southern Kansas. Stock for sale. Cor. invited. F. Playter, Prop'r.

W. D. WARREN & CO., Maple Hill, Kas., importers and breeders of RED POLLED CATTLE. Thoroughbred and grade bulls for sale. St. Marys railroad station

J. S. GOODRICH, Goodrich, Kas., breeder of Thoroughbred and Grade Galloway Cattle. Thoroughbred and half-blood Bulls for sale. 100 High-grade Cows with calf. Correspondence invited.

FISH CREEK HERD of Short-horn Cattle, consisting of the leading families. Young stock and Bronze Turkeys for sale. Walter Latimer, Prop'r, Garnett, Ks.

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

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, Propr's, 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.

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

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

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.

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

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.

W. W. WALTMIRE, Carbondale, Kas., breeder of Registered Chester White Swine and Short-horn Cattle Stock for sale.

OAK WOOD HERD, C. S Eichholtz, Wichita, Ks. Live Stock Auctioneer and breeder of Thoroughbred Short-horn Cattle, Poland-Chinas & Br'nze T'rkys.

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.

DR. A. M. EIDSON, Reading, Lyon Co., Kas., makes a specialty of the breeding and sale of thoroughbred and high-grade Short-horn Catt. 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.

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. Invite correspondence or inspection of stock.

A. J. CARPENTER, Milford, Kansas, breeder of 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.

SWINE.

Registered POLAND-CHINA and LARGE BERKSHIRES Breeding stock from eleven States. Write F. M. ROOKS & Co, Burlingame, Kas., or Boonville, Mo.

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

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.

WM. 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. P.-C. R. 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.

SHEEP.

E. T. FROWE, Pavillion, Kas., breeder of Thoroughbred Merino Sheep. Rams for sale. Also a few Shropshire Rams

POULTRY.

MAMMOTH BRONZE TURKEYS.

My Turkeys are large-boned, fine plumage, very tame and hardy. Stock guaranteed as represented. Price $6.00 per pair, or single gobbler $4.00. Also Brown Leghorn Chickens, $3.00 per pair. Fowls this year's hatch. Mrs. Sarah C. Montgomery, Trenton, Henry Co., Iowa.

FAIRVIEW POULTRY YARDS—Has for sale 200 Chicks each of P. Rocks, Houdans, L. Brahmas, Wyandottes, B. Leghorns and Langshans. Lock box 754 Mrs Geo. Taggart, Parsons, Kas

400 W.F.B. SPANISH and P. Rock chicks for sale, from my prize-winners. General agent for "Poultry Monthly." *Agents wanted.* Prepared shell, $3.00 per 100 lbs. Geo. H. Hughes, North Topeka, Kas.

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, Ks.

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

MISCELLANEOUS

PROSPECT FARM.—H. W. McAfee, Topeka, Kas. For sale *cheap* six registered Short-horn bulls, 1 to 2 years old. Also, Clydesdale horses.

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

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

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.

IMPORTED AND KANSAS-BRED

HEREFORD CATTLE.

For Sale at Very Reasonable Prices.

Representatives: **Horace, Lord Wilton, The Grove 3d**, and other noted sires. Thoroughbred and high-grade bulls and heifers for ranchmen a specialty. Send for Catalogues.

G. E. HUNTON, Breeder,
ABILENE, 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.

(*Continued from page* 1.)

ROLLING.

After the harrowing is completed the land should be rolled before drilling. But if the ground has very hard lumps it may be necessary after rolling a first time to harrow it again in order to pull the clods on top, and then roll again. Rolling compacts the soil still more, and pays, if for no other purpose than for making the surface of the field smooth for driving the drill. It helps very much in making accurate drilling, which should be aimed at by every one.

SEED WHEAT.

The varieties of wheat are very many. They are divided first into the two classes of bald, or smooth, and bearded, or having awns. Under these divisions the varieties are still further classified into red and white chaff, etc. Of late years the market has been better for the red or amber wheats than for the white varieties. The difference is from 5 to 8 cents per bushel more. As these varieties are generally hardier than the others named, and yield as well, the grower need not make any objection to this demand of the miller. This preference is based on the fact that the red or dark colored varieties are harder, and for that reason better suited for the present mode of making flour. Still in some localities the white or lighter colored varieties are much preferred. These kinds succeed best on rich, warm soil, and some of them, as the Clawson, make prodigious yields under favorable circumstances. At the present time, when so many promising varieties are offered to the public, it is advisable to test the merits of one or two varieties each year. Yet these, like all new goods when first brought out, have their good qualities set forth at least. It remains for time to determine whether they have bad qualities which may more than counterbalance. As between the bald and bearded varieties, growers are very much divided in their opinions as to which is the better. Generally the smooth varieties are the most productive. Seed wheat should be pure, *i. e.*, without admixture of varieties, and should be clean, *i. e.*, free from any weed seed, as cockle, cheat, etc., and also from any other kind of grain, as rye, barley, etc. This can only be secured by using a good fanning mill to separate these from the wheat. It is unprofitable, as well as slovenly, to sow wheat from separator without cleaning in fanning mill.

MANURE AND FERTILIZER.

With regard to the using of fertilizers, I would say that if manure is available I would not use the former at all. Too many farmers are working for what I would call "present effect," viz., for a given crop, without regard to the effect of the crop on the land in the future. I try, when I put a field through the rotation of three or four crops, to leave it in better heart than when I began on it. This seems to me to be the ideal of good farming. We cannot afford to skin land now. This is the only way Eastern farmers can compete with their neighbors on the cheap, fresh lands of the West. The business of the writer combines stock-raising with raising grain. This system has, to a large extent, obviated the necessity for using commercial fertilizers, by furnishing plenty of animal manure for enriching the land. Yet fertilizers can be used profitably; but the experience of the writer is that they pay best on rich land. The value (to any crop) of a fertilizer depends on its constituent elements, and their solubility. Those having the highest percentage of ammonia, or available nitrogen, are the best. The super-phosphates are very generally used to drill in with wheat. The effect of fertilizers is to stimulate the growth of the wheat in the fall. They do not as a rule permanently benefit the land like animal manure. Their whole effect is generally expended on the one crop. They are most objectionable on thin lands, because they stimulate to a greater growth of plant than the land ought to grow, and so leave it worse than before.

In manuring it is preferable to apply it to the land for the corn crop which precedes the wheat. This is where the rotation consists of three or four crops, beginning with wheat. In the section of the writer the rotation is corn, oats and wheat, or barley. A second crop of fall grain is often better than the first on good fields here. On some lands the effect of manure applied to the wheat crop is to make too great a growth of straw, and if the wheat falls down it does not fill well. A remedy for this is to lime the land before sowing the wheat. It counteracts the tendency on rich land to excessive growth of straw, as well as stiffens it and makes it very bright in color. Lime is not a fertilizer, as many suppose, but by its chemical action on the soil it sets loose and makes available plant food which is inoperative without its action. About four years ago a neighbor treated a ten-acre field to a top dressing of good manure, and limed it before sowing. It yielded him 400 bushels of wheat. He attributed the large yield to the treatment before sowing. The plan of the writer in putting manure on wheat land is to put the piles in straight rows and a rod apart in the row. The rows should be about a rod apart. The piles should not exceed three bushels in bulk, and should be scattered evenly on top before harrowing. This is sufficient here; other lands may require a greater or less quantity.

SEEDING THE WHEAT.

It is needless, I trust, to argue the question of the merits, as between sowing broadcast and drilling. As the country gets older, and the fields are getting in better order, there is less reason for sowing by hand. Where lands are rocky, or occupied a good deal with stumps, it may be advisable to sow by hand, but with these and a very few other exceptions, the drill is preferable. The drill puts all the seed in to the same depth, and puts it in uniformly; the amount of seed can be gauged with great accuracy; the ridges made by the hoes protect the plants to some extent, and after freezing weather crumble down and cover roots that may have been pulled up. Another advantage in seeding with drills is the facility or economy with which they put on fertilizers. All first-class drills now have fertilizing attachments. Where "the lay" of the land will admit of it, the drill rows should be run at right angles to the direction of the prevailing winter winds. When this cannot be done on account of the steepness of the land, it is often possible to make them at least in a diagonal direction. When thus run the snow will lie longer between the ridges and so shelter the plants. Where a field is drilled by going around it, the turns at the corner should not be made with a curve, but an angle, as the gearing will not feed fast enough on the curve, and so there will not be seed enough at the turns. The amount of seed to the acre depends on several considerations. A fertile soil requires less seed, as it will stool out more. A small-grained wheat requires less, and some varieties stool out more than others. Less seed will be necessary when it is sown early, and as a rule also when the wheat is drilled. The average is about one and a half bushels per acre.

The foregoing is an imperfect (because too much condensed) outline of the theory and practice aimed at by the writer in sowing wheat. Other systems are in vogue in particular localities. One of these is to seed the corn ground without plowing. This seems to do very well in some sections, but will not give satisfaction in all parts. The writer has tried to embody in his system what in his experience is practicable, and his observation in other locations shows to be eminently successful.

Best of Herefords Once More.

On account of the fact that only two hours (10 to 12 a. m.), Thursday, November 5th, was allotted Shockey & Gibb and Campbell in which to sell fifty head of Hereford cattle at Kansas City, as advertised, a part of the cattle will be sold on Wednesday, November 4th, sale commencing at 10 o'clock, sharp. There never has been a better opportunity to buy the choicest of Hereford cattle of both sexes as this sale will afford, and everybody should attend and secure gems with which to start new herds or add to those already established.

They Will Surely Find You.

They are looking for you everywhere. Drafts of air in unexpected places, going from hot rooms to cool ones, carelessness in changing clothing—in short, anything which ends in a "common cold in the head." Unless arrested this kind of cold becomes seated in the mucous membrane of the head. Then it is Catarrh. In any and all its stages this disease always yields to Ely's Cream Balm. Applied to the nostrils with the finger. Safe, agreeable, certain. Price fifty cents.

Gossip About Stock.

On November 11, L. W. Mickey, Plainville, Rooks county, makes a sale of 160 cattle.

C. O. Blankenbaker, a prominent swine-breeder of Ottawa, Kas., departed this life on the 12th inst. Cause of death, malarial fever.

Remember the dates of the cattle sales during the Kansas City Fat Stock Show next week. It will pay to attend every sale and to be present at the Show every day.

In southeastern Kansas the yield of corn is very light this season, and prices per bushel for same ranges from 20 to 30 cents according to quality of grain and firmness thereof. Farmers are feeding a good many cattle, believing it better to dispose of corn in that way rather than sell the same at so low a figure on present markets.

J. A. Davidson, breeder of Poland-China swine at Richmond, Franklin county, Kas., writes that his herd was shown at three county fairs this season and received thirteen first and three second premiums, including the sweepstakes sow at Garnett and Paola, sweepstakes boar at Ottawa, and first premium on herd at Garnett and Ottawa. No herd prize was offered at Paola.

J. B. Arnold, Winchester, Iowa, writes Mr. Walter C. Weedon, Secretary of the American Galloway Breeders' Association: "I am well pleased with my Galloway bull, cow and calf, and the half-bloods that I have are splendid. My great object is attained—not a calf out of thirty has horns. My thoroughbred heifer, out of that picture of a cow I bought of A. B. Matthews, will soon be as big as its mother, and is given up by most cattlemen as at the head of all classes of cattle here."

Mr. J. S. Hawes, of Colony, Kas., in sending us an advertisement, writes: "In making the circuit of the fairs this fall, I have taken thirty-three first premiums, ten second, and five sweepstakes, all breeds competing. If there is any farmer in Kansas thinking of buying Herefords, he should at least see my herd. I can sell them cheaper than Eastern breeders, and animals acclimated to this State. I have the best families of the breed and three of the best stock bulls in the world—Fortune, Grove 4th, and the Lord Wilton bull, Sir Evelyn."

A special meeting of the American Berkshire Association is hereby called for November 14, 1885, at 7:30 p. m., Sherman House, Chicago, Ill. Members of the Association and patrons of the Berkshire Record in attendance at this meeting will have an opportunity also of attending numerous other meetings of kindred Associations in the interest of live stock breeders, occurring from the 11th to the 18th of November, as well as of visiting the great American Fat Stock Show which will then be in progress in Chicago. The meeting of the National Swine Breeders' Association particularly should not fail of a large attendance.

The Messrs. Wilson & Moore stock sale which took place at Parsons, Kas., October 21st, was well attended, the day beautiful and stock sold well. The registered Holsteins brought an average of $177.50 each, and the Short-horns averaged $140 each, while eight last spring grade calves averaged $24.75 each. Two general-purpose mares were sold, bringing $220 and $260 respectively. Mr. Moore had twelve head of English Shire horses, several of which being imported, but did not offer them for sale owing to the lack of buyers for draft animals. A choice lot of pure-blood Poland-China swine was sold, and that, too, at splendid figures. In fact, everything offered brought decidedly good prices for the time of year, and every purchaser seemed pleased. The gentlemen having this sale certainly had an excellent collection of thoroughbred animals, and merit a paying patronage. Col. Sawyer, the auctioneer, did himself honor.

Louisville, Miami county, seems to have a corner on manufacturing. Three firms are engaged there in manufacturing useful inventions, viz.: the Shellhammer Manufacturing Company, the Walcher Washing Machine Company, and a company manufacturing an excellent feed-cooker.

Sleep is pain's earnest salve, and doth ful fil
All offices of death, except to kill.
—*Donne.*

TRICKS ON THE TRACKS!

Dangers from which Engineers Save the Public and Themselves.

[*The Rai way Review.*]

One who is accustomed to railway traveling can scarcely realize how much he is dependent for safety upon the engineer. Added to the responsibility of their station, engineers are also in constant danger of accidents caused by the tricks of jealous rivals.

This rivalry, it is said, sometimes prompts to the doing of utterly mean tricks. A Nickle Plate engineer after his very first trip was laid off because he had "cut out" all the bearings of his engine. He was re-instated, however, after he proved that some rival *had filled his oiling can with emery.* Another new engineer was suspended for burning out the flues of his boiler. Through grief at the loss of his position he died, and then a conscience-stricken rival confessed that *he had put oil in the tank* so that it foamed and showed water at the top gauge, when in reality there was scarcely a quart in the boiler!

These intense jealousies, together with the terrible anxiety incident to their work, has a terribly straining effect on the nerve, and statistics tell us that, though Locomotive Engineers may look strong and vigorous, they are not all a hearty class. Ex-Chief Engineer A. S. Hampton, Indianapolis, Ind., (Div. 143) was one of those apparently hearty men, but he says: "The anxiety, strain and jolting came near finishing me." His sufferings localized in catarrh of the bladder, but he used Warner's safe cure faithfully for twenty weeks and now exclaims, "I am a well man." T. S. Ingraham, of Cleveland, Ohio, assistant Chief engineer, and other prominent members are also emphatic in its praise.

The Locomotive Engineers' Brotherhood has 17,000 members and 240 divisions. Its headquarters is in Cleveland, Ohio, where Chief Engineer Arthur for twenty years has exercised almost dictatorial sway. It was organized in August, 1863, by the employes of the Michigan Central. It has given nearly two million dollars to the widows and orphans of deceased members.

Mason & Hamlin Pianos.

Mason & Hamlin bid fair to become as famous for their upright pianos as they have long been for their world-renowned cabinet organs. The distinguishing feature about the "Mason & Hamlin Upright" is an important improvement in the method of holding the strings of the piano, which originated in their own factory. The strings are secured by metallic fastenings, instead of by the frictinn of pins set in wood, as has been the case, and the advantages resulting are numerous and highly important. Among them are the following: Wonderful beauty and musical quality of tone; far less liability of getting out of tune; greater reliability in trying climates; and greater solidity of construction and durability. Mason & Hamlin have made 150,000 organs. They can hardly expect to make as many pianos, but they will doubtless be called upon for a very large number. Indeed, their piano department is now running to its utmost capacity, and the Company is behind orders. So great is the demand that the Company is now arranging for a large additional factory building.

Excursion to Los Angeles.

The chance of a lifetime to see the sights and cities of California and intermediate objects of interest along the Union Pacific railway. Round trip tickets good for six months for $100. Excursion train first-class in every particular. It leaves Omaha and Council Bluffs Wednesday, November 25, at 11 o'clock a. m. The points it will stop at are Denver, Ogden, Salt Lake City, thence to Los Angeles. If you wish to join the party write at once to J. W. Morse, General Passenger Agent, Omaha, Neb., or D. E. Cornell, General Agent, Passenger and Ticket Departments, Kansas City, Mo., for full particulars.

Correspondence.

To New Orleans and Back.

Kansas Farmer:

I have thought for some time that I would write something about my Southern trip, but an abundance of work has kept me from doing so. Now as the exposition will open another winter and a great many are going, perhaps some would like to find out something about it and the country around.

New Orleans from Kansas City *via* Memphis is less than 850 miles; from St. Louis about 750 miles; and from Cario, Ill., *via* Illinois Central, 550 miles. The schedule time is thirty-six hours from Kansas City, thirty from St. Louis. and twenty-four from Cairo.

New Orleans was laid out in the form of a crescent, with the points pointing north.

The main part of the city is on the north-west side of the river. The river east of it, running almost north, and the exposition grounds are west and south-west, on the western point of the crescent. Canal street is the great business street of the city, named so because when the city was laid out they expected to dig a canal to connect the two points of the cresent, and it was made 200 feet wide. All the street car lines start from there, and at the foot it all passenger boats depart and arrive. The distance from the foot of it to the exposition by street cars (four lines) is five miles, and by river seven or eight. When I was there cars left every minute, and boats, when they could get a load; time of either one to the grounds, about forty minutes.

I found the grounds and buildings were kept neat and clean, with plenty of good walks to all parts of the grounds. The inside of the buildings were laid off in streets, like a small city, and each department or state occupying one or more blocks. France had the greatest exhibit in the foreign departments, having more than all the rest together, outside of Mexico. In the government buildings were the state exhibits, and while some excelled in some things, others did equally as well in something else, so it was hard to decide which was the best.

The city, in some respects, was better than I anticipated, but the back streets were terribly dirty. The soil around the city is like that of Illinois, and in a wet time, without pavements, the streets are almost impassible. They have no wells, using rain water, which they keep in large wooden tanks, two or three sitting at the corners of every house. Throughout the city are small parks, with a monument of some celebrated person in the center. Those that I remember were Franklin, Jackson, and Lee. Great many of their roads are covered with oyster shells, stone being almost out of the question. I do not think I saw even a wagon load of stone south of the Ohio, except what were imported. The levee is planked on piles, and is raised nearly level with the city, which saves a great deal of cursing for the dray-men. I only saw a few ships unloading, one large one having on board 80,000 boxes of lemons and oranges, taking forty hands six days to unload it into a warehouse near by, the stevedors getting four dollars for ten hour work. For loading cotton they get six dollars for nine hours. I only saw one grain warehouse. Most of the grain is taken there in barges, and that which is loaded into ships is handled by an elevator on a steam tug, the tug hitching on to the barge and drawing it alongside of a ship and one spout is let down in the hole of the barge, and the grain is raised up in an hour or so and poured into the vessel.

Louisiana, as a State, has some advantages to offer the poor man, having prairie in the western and timber land in the north-eastern parts, that can be bought cheap or homesteaded. Cotton and sugar are the great crops; cotton averaging about 300 pounds to the acre; wheat they do not raise; while oats and corn average fifteen bushels an acre. But at 75 cents for oats and $1.00 for corn, the price that it has been all over the South (in small amounts) for the last three years, would compare favorably with some parts of the West.

Almost all complained of the difficulty in getting reliable laborers. I only saw one man that had solved the question. He was formerly an Illinois soldier, has been twelve years in the South, and is at present a building contractor, making his own brick. He was warned that he could do nothing with the Negro. At first they were dilatory, but if they lost a minute he took it from their wages, and now he said he had as good a set of hands as he wished, paying $1.50 for ten hours' work. While the Negro has not the energy of the Northern man, still they do nearly all the hard work in the South. I do not remember of seeing a white man at work in the fields, either in going or returning through the State of Mississippi.

From what I saw and learned, I think slavery has really been a greater curse to the whites than the blacks of the South.

E. W. BROWN.

The Silver Question.

Kansas Farmer:

I was greatly pleased with your article on the silver question in a recent issue of your paper.

Your note of warning came none too soon, and can scarcely be too often or too forcibly repeated. There is little room to doubt that there is a financial conspiracy to establish a gold standard, and if possible to deprive silver of its legal tender quality. Failing in this, the conspirators will if possble stop coining silver, or increase its weight and costliness and thus produce financial disturbance and depression, which will increase the value of notes and mortgages by just so much as the difficulty of converting the products of farms, factories, and all productive industries into cash, is increased.

In anticipation of congressional action in the desired direction, gold is being gathered and hoarded by capitalists. So long as silver is abundant *and a legal tender* there is and can be no reasonable motive for hoarding gold. But the moment there appears a prospect that silver will from any cause cease to be available for the payment of debts, hoarding of gold begins. The gold-bugs have for years argued that cheap silver would drive gold out of circulation, but the facts prove just the reverse. Cheap, abundant silver forced gold to circulate freely by its side, or retire to the capitalists' vaults, there to lie idle and unproductive. When silver is made scarce or robbed of availability then gold is found scarce and can be drawn from the capitalists' vaults only by the payment of a premium that is measured by the necessities of the debtor—and the rapacity of the creditor—classes.

Doubtless it would be desirable to have a silver dollar that is intrinsically worth a dollar in gold, and when an exchange of the current silver dollar for such a one, without injury to the present holders of silver or a disastrous disturbance of finances, can be effected, few, if any, will be sorry.

We, the people, should demand so earnestly and emphatically as to make ourselves heard and heeded, that whatever legislation is had *shall be in this direction.* The interests, the safety, of the debtor class—the producing class (they are largely one and the same)—must not be placed at the mercy of the money-lending, interest-gathering, debt-collecting class. P. C. BRANCH.

Sterling, Kan., Oct. 15, 1885.

Cleaning Up.

Kansas Farmer:

While it is the best plan to keep the farm as neat and clean as possible, yet in addition to this a general cleaning up at least every spring and fall should be undertaken and carried out as completely as possible.

The stable yards and the stable should have all the manure cleaned up and hauled out on the fields: make thorough work. Clean up the poultry house and give a good white-washing.

If you have a pail of wood ashes from the ash-hopper haul out and apply to the trees in the orchard. Go over the farm and see that all the machinery and farming implements, even to the hoes, spades and rakes, used in the garden, are all gathered up and stored under shelter. Grease or varnish all the iron or steel parts that should be kept dry and bright. If your shed has no floor put boards or pieces of wood under them to keep the wood from rotting. I find it a good plan to have a light frame made up under the root to store the smaller tools, as they can be kept drier and more out of the way than when on the ground.

Clean up the garden; burn all the trash, especially the weeds. Store away the pea-brush and bean poles and tomato stakes; they will be useful next year. I prefer to use sassafras, because if properly cared for they will last several years.

Clean up the wood pile; pile up the wood, it will dry out better. If you have not got a wood and coal shed build one; if you cannot afford a nice one build as cheap as you can. It does not pay to allow the wood and coal that you are to use during the winter to lay out exposed to all kinds of weather. On many farms the fence corners need cleaning up; burn all the weed stalks possible. During the summer when the weeds are green and have not matured their seeds, I prefer to plow under; but after they are dried and the seeds ripe to the fall, I prefer to burn up so as to destroy as many seeds as possible. Gather up all the loose boards and wood or rails around the place, as they will be out of the way during the winter. After cleaning up the stable and barn lot, scatter a good coat of straw, fodder or bagasse over the ground so that the stock will tramp it down and it will be there to absorb the manure during the winter.

A day or two spent in cleaning up will add much to the appearance of the farm besides saving considerable trouble during the winter, as well as improving the farm, saving the implements, destroying the weed seeds, and increasing the fertility.

There is very little use in allowing very much to go to waste, and keeping cleaned up is an important item and should be attended to as well as other necessary work on the farm. N. J. SHEPHERD.

Eldon, Miller county, Mo.

Notes From Russell County.

Kansas Farmer:

As I have not seen anything from Russell county lately, I thought I would try again.

We have been blessed with just enough rain for all purposes this fall, and if winter grain is not a success this time it cannot be the fault of the weather.

Grass, corn and vegetables were good crops, and farmers are in good spirits accordingly.

Stock of all kinds is looking well.

The railroad land is being sold quite fast; everything is prospering in the county. Our county seat, Russell City, is profiting by the farmers' boom and building some fine business houses and dwellings.

The temperance element is gaining ground in the county, and we hope to see the time soon when all liquors to drink as a beverage shall be banished from our midst.

RUSSELL COUNTY FARMER.

Book Notices.

Allen Thorndike Rice, editor and proprietor of the *North American Review*, announces that he has concluded an agreement with General Beauregard by which he will write a series of four articles on "The Shiloh Campaign," "The Defence of Charleston," "The Drury Bluffs Campaign," and "The Defence of Petersburg." These articles will appear in the *North American Review* in the course of 1886. The Shiloh article, which is likely to provoke a lively controversy, will appear in the January number.

The *Woman's Magazine* for September presents a varied and excellent table of contents: A genuine and first-class love story by Margaret E. Winslow, a well-known writer; a plea for the working women, by Dr. Talmage; for women physicians by a physician; an account of the "Louisville (Ky.) School of Pharmacy for Women,"—the first one ever established; a fine story for the children; numerous short articles and poems, and a new department, for Woman's Work in Missions, with opening article by Mrs. Jennie F. Willing, of Chicago. Ten cents a copy, $1 a year; Frank E. Housh, publisher, Brattleboro, Vt.

An article that will gratify almost universal curiosity is promised in the November *Harper's*—"The New York Stock Exchange." It will present a sketch of the growth of the Exchange from its organization by twenty-four brokers, who met under a buttonwood tree in Wall street in 1792, to its present membership of 1,100, with a building worth $1,800,000, a salary list for employes of nearly $200,000 yearly, an initiation fee of $20,000, and yearly transactions of about $13,000,000,000, dividing a profit probably of over $30,000,000. The writer, Dr. R. Wheatley, describes at length the organization of the Exchange, explains its legitimate business function, and sets forth plainly how its facilities are sometimes made use of to fleece the dear public; tells the story of one of Jay Gould's great manipulations of the market, and gives the slang of the street—a portion which is in itself an interesting contribution to the curiosities of language. Views of the Exchange, portraits of its officers, and of Vanderbilt, Jay Gould, Cyrus W. Field, Russell Sage, and other operators, and other illustrations, make the paper still more interesting.

OUR SILVER COINAGE.—This is a little book of 108 pages, containing some primary facts that people generally are interested in knowing. It is prepared by John A. Grier, Philadelphia, and published by Sherman & Co., Seventh and Cherry streets, Philadelphia. Price 25 cents. The publishers have a card in each volume containing these words: "The question of what shall constitute the money of our country is one which is now commanding the attention of the whole people. It is a question which threatens to revolutionize the values of real estate, to reduce the wages of the laborer, and to double the burdens of the debtor. It will effect, directly, the silver producer, but it will effect the grower of cotton and wheat in a much greater degree. It is a question that few people understand, because few have studied it. But the time has come when it must be studied. It will enter largely into the organization of the next House of Representatives, and consequently, each member of that House owes it to his constituents to take especial pains to inform himself. You are therefore courteously, but earnestly, requested to peruse with care the accompanying document."

NEWSPAPER STATISTICS.—Of the statistics of all the departments of the Census Bureau none is more valuable and interesting than that which collects the data of the press of our country. There is no better way to judge of the success and prosperity of any section of country than to examine the newspapers published in that section—as they are successful and prosperous, so is the country and neighborhood in which they circulate. As the reports of the Census Bureau are issued but once in ten years, it can be readily seen that if we were obliged to depend on them alone, we would lose much valuable information and time, and would only receive our information after it had been rendered almost useless by its age. Thanks to private enterprise and capital, however, we are able to keep ourselves posted from year to year on the data of the press throughout the country. Of these private enterprises none is more relied upon or of more value than that of Edwin Alden & Bro.'s *American Newspaper Catalogue* which is published each year by that pushing firm of advertising agents. According to this catalogue just published there are in the United States and the British Provinces a total of 16,105 newspapers and periodicals, of which 15,368 are published in the United States and 737 in the British Provinces. They are divided as follows: Dailies, 1,411; semi-weeklies, 188; tri-weeklies, 64; weeklies, 11,567; Sundays, 426; semi-monthlies, 356; monthlies, 2,010; bi-monthlies, 40; quarterlies, 141. This is a very handsomely bound book of some 1,000 pages. Sent prepaid on receipt of $1.50. Address Edwin Alden & Bro., New York and Cincinnati, O.

POPULAR SCIENCE MONTHLY FOR NOVEMBER.—The November *Popular Science Monthly* leads off with an illustrated article by T. W. Mather on the subject of "Flying Machines." It gives a history of the chief inventions of that kind, and a great deal of information on the scientific problems and conditions involved and the reasons for believing that the navigation of the air is practicable. "Modern Science and Modern Thought" is a readable and vigorous article from a new English work under that title by S. Laing, M. P. J. M. Keating discusses "Twenty Years of Negro Education" very instructively, by giving an account of the progress that has been made in the Southern States, both in overcoming prejudices against the teaching of the colored race, and in devising and carrying out plans for its extension. "Two Wonderful Instruments," by Albert Leffingwell, M. D., is an ingenious chapter in optics. "A Free Colony of Lunatics," by Henry de Varigny, is a fresh and instructive account of the remarkable experiments at Gheel, in Belgium, concerning the treatment of the insane, which have long attracted the attention of the world. That brilliant and versatile writer, Professor Grant Allen, discourses charmingly on the rural subject of "Clover," and John F. Hume offers some important "points" on "The Art of Investing." One of the strongest articles in this number is by Professor C. A. Eggert, of the Iowa University, on "The Problem of Higher Education." He takes the liberal side on the classical question, and throws a good deal of light on the historical study of Greek, and especially on the treatment of that subject in the higher schools and universities of Germany. D. Appleton & Co., New York. Fifty cents a number $5 a year for

The Home Circle.

The Hymn of the Wiltshire Laborers.

Oh God, who by the Prophet's hand
Didst smite the rocky brake,
Whence water came, at thy command,
Thy people's thirst to slake;
Strike, now, upon this granite wall,
Stern, obdurate, and high;
And let some drops of pity fall
For us who starve and die!

The God, who took a little child,
And set him in the midst,
And promised him His mercy mild,
As, by thy Son, Thou didst;
Look down upon our children dear,
So gaunt, so cold, so spare,
And let their images appear,
Where Lords and Gentry are!

Oh God, teach them to feel how we,
When our poor infants droop,
Are weaken'd in our trust in Thee,
And how our spirits stoop;
For, in thy rest, so bright and fair,
All tears and sorrows sleep;
And their young looks, so full of care,
Would make Thine Angels weep!

The God, who with his finger drew
The Judgment coming on,
Write, for these men, what must ensue
Ere many years be gone!
Oh God whose bow is in the sky,
Let them not brave and dare,
Until they look (too late) on high,
And see an Arrow there!

Oh God remind them! In the bread
They break upon the knee,
Those sacred words may yet be read,
"In memory of Me!"
Oh God, remind them of His sweet
Compassion for the poor,
And how he gave them Bread to eat,
And went from door to door!

—*Chas. Dickens.*

Children are what the mothers are,
No fondest father's fondest care
Can fashion so the infant heart
As those creative beams that dart,
With all their hopes and fears, upon
The cradle of a sleeping son.

His startled eyes with wonder see
A father near him on his knee,
Who wishes all the while to trace
The mother in his future face;
But 'tis to her alone uprise
His wakening arms; to her those eyes
Open with joy and not surprise.

—*Walter Savage Landor.*

A Few Words Thrown In.

O, "Bramblebush!" You put me to shame. I never could accomplish all you do. I have a fine sewing machine, a steam washer and wringer, and sometimes almost fail to make all the ends meet on Saturday night. I am very glad that there are such able ones as you, for they serve as an impetus to us less capable ones. They also make a splendid example for complaining husbands to bring up to their wives.

I manage at odd times to read five or six weekly papers and a much-cherished *Household*, but I had reference to other studies, as reviews of old studies, books of travels, histories, etc. Of course, men's papers are necessary to keep up with the general affairs all over the world, but they are not the fount of all wisdom.

Mrs. Hunter, I had reference to incubator-hatched chicks, reared by hand, as one can raise so many more and still keep the old hens at work, and like Fanny Field, I want to raise a great many another year and be forearmed. I agree with you on the temperance question. I think if many farmers and their wives were more temperate workers there would be less irritableness, and fewer unhappy families. It is nearly impossible to be always pleasant and kind when overworked, especially if one is naturally nervous, and a cross word brings a cross answer, and so a war of words. "Bear and forbear" is a grand family motto, but it takes lots of Christian grace to live it.

"Bramblebush," don't be too hard on the farmers; they are not all like "Griselda," though I am sorry to say there are too many of them. I do not like to hear the men spoken hard about, for the one I have had experience with is one of the best, and there may be many of them. I often think many women allow too many burdens to accumulate for them to bear, and so think that they are laid upon them, and they must carry them, which if they would decidedly set their foot down even if they had to enforce it with a severe example, there would be a way provided for some one else to take a load.

O, the nice October days we have been having! How I would like a peep at a forest of evergreen and hard maple, with their beautiful shaded boughs.

CLARIBEL.

Cooking Meats.

I believe that as a general rule farmers' wives are more ignorant of the best methods of cooking meats than of the preparation of any other article of food which comes to their tables. Many women who pride themselves on the whitest of bread, the lightest of cake and the flakiest of pastry, serve meat which has had "the goodness" so cooked out of it that it is as dry and tasteless as the proverbial chip. "All roads lead to Rome" and too many make all meats travel *via* the frying-pan route to the table. The method has "inglorious ease" as its principal recommendation, yet there is a right and wrong way to use even a frying-pan. Beefsteak, mutton chops, chickens, fresh fish and ham are more palatable and nutritious if broiled; and the inexpensive wire broiler, with long handles which enable the cook to avoid the heat of the fire, has replaced the old-fashioned cumbersome gridiron, and its lightness and ease of handling make broiling as easy as frying. But if the frying-pan or "spider" must be used, the right way is to have the pan hot, lay the meat in and turn almost instantly, repeating the turning every two or three minutes; you sear the surface and in this way the juices of the meat are cooked *in*, not *out*, and also prevent the formation of a hard crust of over done meat. I have seen a woman who prided herself on her reputation as a good cook, put half a tablespoonful of pork drippings into a frying-pan, let it just melt, and then lay her beefsteak into the semi-liquid fat. As a natural consequence the meat was hardly fit to eat, and the complaint was made that the local butcher "never had any decent beef." If meat is laid in a cold or merely warm pan, covered up and cooked in its own steam, the rich juices are found in the gravy, and the meat has lost just that amount of what makes it palatable and nutritious. Nor should beefsteak or chops be salted while cooking; the salt extracts the juices which should be preserved in the meat. Sprinkle with salt when laid upon the platter, and spread a bit of butter upon each piece if preferred; many relish it best without any addition but the salt, but if butter is used it must be, like Cæsar's wife, "above suspicion."

The ordinary "roast beef" of the farmers' table is simply baked beef. The meat is put in a dripping-pan, sprinkled with salt and pepper, the pan filled up with water, and set in the oven. The meat is "basted" with the water in the pan. The better way is not much more trouble, and requires a standard on which the meat is placed, entirely out of the water, of which only enough is used to keep the pan from burning, that it may be the richer for the gravy. The oven should be quite hot at first, to cook the outside enough to keep the essences of the meat within, and the heat then gradually diminished to a good baking temperature. Some good cooks cut off portions of loose fat, or obtain them from the butcher, melt them in a little basin, add salt, pepper and two or three cloves, and baste the meat with this. Ribs of pork, the "spare-rib," may be temptingly cooked by cracking the ribs, folding over, and filling the opening thus made with a regular turkey dressing, with oysters if desired. Wind a string or piece of tape around to keep the bones in place, and cook as usual, turning to brown both sides alike. A rib roast of beef can be cooked the same way, or "roasted down" in the big kettle.

When a farmer kills a beef animal for home consumption, there are many rough pieces to be used for mince-meat, etc.; put these, after washing, into *hot* water, and not too much of it. Other pieces are for soup; have the bones in these well cracked, and put into cold water.

Just here it occurs to me to ask why soup is so seldom seen on a farmer's table? Except the festive oyster stew for holidays, dinner parties, or weddings, soup rarely forms part of a farmer's dinner. Yet the city housekeeper finds it almost a necessity in economical cooking, and a good soup is highly prized by the *bon vivant*. The usual objection is that it is not hearty enough for farmers, whose robust frames require more substantial nourishment. But it is not expected nor desired that an ordinary meal should be made of it; it is an appetizer, a preparation for the substantial viands to follow, to warm the stomach, to take off the keen edge of the appetite, yet by no means to spoil it. Meat soups—those in which meat enters largely—ought to be made the day before they are to be eaten, that they may get cold and the fat removed. Anything but a greasy soup; it is offensive to the eye and unpleasant to the palate. Keep soup in earthenware or china; never in tin or iron; remember it should not boil, but gently simmer at the boiling point. In making oyster soup the oysters should be put into the seasoned "stock" while it is boiling, and the soup removed from the fire and served the moment it reaches the boiling point after the oysters are in; they do not then so much resemble fragments of sole leather.

Gravies, which are allied to soups, are generally *too greasy*. Dip off all the fat possible; it is horrible to see a gravy-boat a third full of clear grease, nor is it healthy to eat so much fat. We are not Esquimaux, who need to live on whale blubber to keep the vital fires burning, and the less grease we give to our much-enduring stomachs to digest, the clearer our complexions and purer our blood.

Ham, to be eaten cold, should stand in the water in which it was boiled until it is cold; it will not be so dry and hard. The same is true of corned beef, or almost any meat intended to be eaten cold. Not long ago a lady asked how corned beef could be kept during the summer months. I know of no method by which it can be kept except by the use of so much salt that it is rendered hard and unpalatable. Our city packing houses furnish it to their customers till quite late in spring, but at the last it is apt to be somewhat "off flavor." When corned beef is found to have "turned" just a little, so that it gives off an unpleasant odor in cooking, a few pieces of charcoal in the water will do away with the smell, and the meat will come out perfectly sweet and fresh. This I tried once when the brine on our beef soured "unbeknownst" to us. Saltness in corned beef may be remedied in a measure by putting it into cold water, cooking for an hour, pouring off the water and putting in a fresh supply, boiling hot. If you would have the fat of a baked ham anything but a "sizzle" or scrap, cover it before baking with a flour-and-water batter, which prevents it from drying up. If you like a crisped outer surface, remove the crust when the meat is done, and return to a *very hot* oven just long enough to brown it a little.

The average farmer's wife has more experience in cooking pork than any other kind of meat; she ought to do it to perfection. Too often it is not cooked enough, and is sent to the table swimming in its own grease, which is eaten as gravy, a most unwholesome substitute for butter. Fry till *brown* and *done*, not to a crisp, till it is like a "crackling," nor only warmed through. Take up on a platter and dip a tablespoonful or two of sweet cream upon it. Pour off all the fat except a tablespoonful or two, stir into this a scant tablespoonful of flour, mixing well to prevent lumps. Turn enough sweet milk into this to make it the right thickness, let boil up, and serve in a gravy boat. This is "way ahead" of clear grease, ycleped gravy.

Boiled salt pork is agreeable neither to the eye or the palate. Do not serve it "plain boiled," but when tender score the top and bake in a hot oven fifteen minutes. It will smoke and splutter, but it is "away ahead" of boiled pork.

Do our Michigan farmers ever eat mutton? It is a meat seldom seen on their tables, so far as my experience goes, yet it is much more healthy than so much pork. Many regard it unfavorably because of an alleged "wooly" taste, which is easily prevented by giving the animal to be slaughtered no food for twenty-four hours, and then doing the work as quickly as possible, taking especial care that the wooly side of the pelt does not touch the meat. I have little to say in favor of boiled mutton, especially if the animal was killed because it was too ancient to be longer profitable on the farm. But roast lamb or juicy chops, or roast leg of mutton, find favor almost everywhere. It is a great deal in the cooking, as indeed is true of almost any meat. Roast mutton by all means, and use the rough pieces to make a mutton stew with vegetables. A shoulder of mutton can be made a *piece du resistance* at dinner by filling it with a dressing prepared in the usual manner, flavored with a pinch of sweet herbs, if liked. Skewer into compact shape; or bind with a bit of tape or strip of cloth, lay in a stew-pan and simmer till nearly done on top of the stove, adding pepper and salt and a small onion shredded, if desired. Then put into a dripping-pan and brown nicely in the oven,

Do not "parboil" fowls unless they are so venerable that you cannot make them palatable in any other way. An old fowl can be cooked tender in time, but the meat is never so juicy and well flavored. Some wild birds, as ducks, pigeons, etc., must be parboiled to remove the strong "gamey" flavor. But a moderately tender chicken can be baked, fricasseed or broiled without. If you wish to cook a fowl a day before it is to be eaten, and still have it served hot, cook it thoroughly, and after it is cold, wrap it in a sheet of strong white paper, covering every part of it and securing the paper firmly in place. Heat in a moderate oven for half or three-quarters of an hour, according to size, basting frequently with the drippings in the pan, which prevents it from drying up. By this plan warm fowls may be served at a late supper or Sunday dinner after church, no one need stay home to attend to the cooking, and even if the minister is a guest, though the latter are generally good judges of "chicken fixings," the verdict will be "all right."—*Beatrix in Household.*

"Doctor, what is the best material for a bathing suit?" "A bear skin."

A suggestive sign reads: "Don't go somewhere else to get swindled; walk in here."

"Boy, what is the reason you are not up?" "Well, father, it is so dark yet I can't see to wake up."

The Young Folks.

Why?

The very oddest boy I know
Is Robin Adair with his head of tow,
And his brave, bright eyes where questions grow.

For this very same boy is asking *why*
From the time that morning paints the sky
Till the sleepless stars come out on high.

Why does Jack's kite stay up in the sky?
It has no wings, and yet it can fly!
And sister says wishes go just as high.

Why is oatmeal healthy and candy good?
Is it always naughty to do as you would?
And would you be an angel if you could?

This rose was a bud, and why did it burst?
This bird was an egg, and which came first,
The egg or the bird, and how was it nursed?

What is the wind and where does it stay?
When it hushes itself and creeps away
Is it sighing or singing, and what does it say?

Why is it bad for boys to fight,
And for soldier-men so brave and right?
Why do I love you best at night?

Why do the oaks and elms stand tall,
And the apple trees do the work for all
With their gnarled old branches ready to fall?

Why does a great strong gentleman ride
In a carriage handsome and soft and wide,
And a tired old woman walk by the side?

Ah! Robbie, I'll neither laugh nor cry,
But I'll tell you a secret deep and high—
The grown-up children keep asking, Why?

And the answers are somewhere safe and fair,
Beyond the stars and the star-lit air,
For men and women and Robin Adair.

—*Youth's Companion.*

The Largest Land Animal in the World.

Since the death of Jumbo various statements have been published as to the exact stature of that giant elephant. The figures range from eleven feet to eleven feet and a half, but whether the height given is that at the shoulder does not appear. If Jumbo was eleven feet and six inches high at the shoulder there is reason to believe that he was the largest land animal in the world.

The size of elephants is commonly overestimated. Their stature is almost always exaggerated in those countries where they are found wild. Even European travelers of scientific training have made notable mistakes in this respect. African elephants which Major Denham, one of the early explorers, supposed to be sixteen feet high proved to be less than ten feet when killed. In Ceylon the native elephant, which was formerly thought to be larger than the African animal, is rarely taller than nine feet; and Sir Emerson Tennent in his celebrated work on the natural history of that island says that in the district where the hunters agree that the largest specimens are to be found, "the tallest of ordinary herds do not average more than eight feet."

In India the same tendency to exaggeration prevails. Dr. Falconer was authority for the statement of Prof. Ansted, more than a quarter of a century ago, that "out of eleven hundred elephants from which the tallest were selected and measured with care, on one occasion in India, there was not one whose height equaled eleven feet." At the present day probably no one is better qualified to speak with reference to the size of Indian elephants than Mr. G. P. Sanderson, the officer in charge of the elephant-catching establishment maintained by the British Government at Mysore. He does not believe that there is an elephant in India ten feet high at the shoulder. He has measured a great many, and the tallest was nine feet and ten inches. "The next largest are two turkers belonging to his Highness, the Maharajah of Mysore, each nine feet eight inches, captured in Mysore some forty years ago and still alive." Mr. Sanderson, in his very entertaining work on the wild beasts of India, says that twice round an elephant's foot is his height, within one or two inches. Generally this measurement will give the exact stature, but when persons unfamiliar with elephants are asked to guess how many times the circumference of the foot must be multiplied to ascertain how tall the animal is, they say from ten to fifteen times.

Not only may we reasonably conclude that Jumbo was the largest land animal in the world, or at all events, without any superior in size, but it is safe to say that a much larger walking beast could not be made out of flesh and bones. This is mechanically demonstrable. In order to support a heavier creature, the size of the legs, even with practically solid bones, would have to be so increased as to render progression impossible.

These considerations indicate that we shall never see a larger land animal than Jumbo.—*New York Sun.*

Birds and Their Ways.

I have often played with birds, evidently making them think I was afraid, and that they were really driving me. One summer a pair of kingbirds (*Tyrannus carolinensis*) drove me about for a long time. They had built close to the piazza, and had become quite tame before they found how afraid I was of them.

The rose bugs were very numerous at this time, and I soon found that the kingbirds were helping me exterminate them; they would alight on a rose bush and devour the bugs greedily. As they came near to me, I would cautiously move further away; this the birds were quick to notice, and soon became so bold that they would drive me from bush to bush. After the bugs had entirely disappeared, when I went to the bushes to cut flowers the birds would often drive me away, and then hunt over the bushes, as if they thought my sole business was bug hunting.

No other bird was so easily tamed or proved so confiding and intelligent as the catbird. A pair of this species nested in a honeysuckle that climbed over the back piazza; and here was a bird, the male, who was not only not afraid, but he appreciated me, and was companionable and intelligent, and the best musician of the grove, fully equal to his famed Southern cousin, the mocking-bird (*Mimus polyglottus*). I could call this catbird from any part of the grove or orchard, and set him to singing as if in an ecstasy of delight, but in return for this I must be his servant and do his bidding.

There is a keen sense of enjoyment, I might say of exalted happiness, in being able to bring free birds of the grove around one, which well repays for the time and patience and hermit-like life necessary to accomplish it.

If a cat made its appearance on the grounds, and I was not in sight, the bird would come screaming close to the door, when I would accompany him, he pointing out the cat, which I would drive in no gentle way from its lurking place; other birds clamored about me, chasing the intruder, but he was the only one that returned with me to the house, where he expressed the most decided satisfaction. Several times, just as it was growing light, the wily cat was prowling about and the bird would call me from my bed with his cries. Hastily throwing on a waterproof cloak, I always went to the rescue, and often drove the robber through the wet orchard out across the street, the bird always accompanying and returning with me. The female was confiding and gentle, but not so intelligent as the male.

The second nest of this pair was built in a cedar tree back of the house, within a few feet of the shrubbery before mentioned. The birds were three or four days building, and during this time I could not win the male from his work. I tried the softest blandishments, talked, chirruped and whistled, but all in vain. He was intent upon his work, and I was of no consequence whatever. He was a most exemplary mate, doing his share of the work with a will and perseverance even in the face of temptation, an example of allegiance well worthy to be followed. I began to fear that I had lost my power over him. But no. No sooner was he at liberty than he returned to his pretty confiding ways. He would flutter close to me, and chatter and sing and perform curious evolutions, as if in an ecstasy of happiness.

My favorite bird was monarch of the shrubbery, except when the robins came for a bath, when, with a very ill grace, he took the part of a subordinate. Upon one occasion I witnessed a very amusing scene. I had just supplied the fresh water, and the bird was enjoying it, when a robin came flitting in, followed by a young speckle-breast. The catbird, without a single protest, left the water. Of course he was afraid of the robin, or he would not have left so promptly; but after he had gone he manifested the greatest anger, he flew to a shrub just above them, and screamed with all his power, dropping his wings and looking very fierce and hostile, to all of which the robins paid no attention. Then he came toward me and back again, evidently asking me to drive them away; but I would not interfere. After the robins were satisfied they left the water and flew into the sunshine and coolly arranged their feathers.

Upon another occasion an incident occurred showing the bird's intelligence. A side gate had been left open and a neighbor's hen had wandered in. The bird's cries summoned me, when he pointed out the hen, which was scratching among the shrubbery. All summer the bird had been accustomed to seeing the fowls in the adjoining lot, and was not at all afraid of them; but he knew this hen had no business in his dominions, and he was not content until she was driven out, which he assisted in doing, following her up with his mewing cry until she passed through the gate, when he returned to his place with a very complacent air.

Some Curious Trees.

The India rubber tree is a native of India and South America.

The guava tree, from the fruit of which the delicious guava jelly is made, is a native of the Indies.

In Malabar a tree called the tallow tree grows; from the seeds of it, when boiled, is procured a firm tallow which makes excellent candles.

There is a tree in Jamaica called the life tree, whose leaves grow even when severed from the plant. It is impossible to kill it, save by fire.

The butter tree was discovered by Park in the central part of Africa; from its kernel is procured a nice butter, which will keep a year.

The banyan tree is a native of India, and an object of great veneration among the Hindoos and Brahmins, who look upon it as an emblem of the Deity.

The manna tree grows in Sicily and Calabria. In August the tree is tapped, and the sap flows out, after which it hardens by evaporation, and the manna is left, of a sweet and nauseating taste.

The milk tree is a native of South America. Its fruit is about the size of a small apple; but the milk is the greatest wonder, which is procured by making notches through the bark. At first when it runs out it is as thick as cream. It has the same properties as glue.

The camphor tree grows in Japan and in some of the islands of the Pacific. The camphor is extracted from the wood of this tree, where it is formed in concrete lumps, some of which are as large as a man's arm, though this is rare. The tree has to be sacrificed to procure the camphor.

The cow tree, or palo de vaca, grows on rocks in Venezuela, South America. It has dry and leathery leaves, and by making incisions in its trunk a kind of milk oozes out, which is tolerably thick and of an agreeable balmy smell. At sunrise, the natives may be seen hastening from all quarters, furnished with large bowls to receive the milk.

The sorrowful tree is found in the Island of Goa, near Bombay. It is so called because it flourishes in the night. At sunset no flowers are to be seen, but soon after it is covered with them, which close up or fall off as the sun rises. It has a fragrant odor, and blossoms at night the year round.

The Island of Fierro, one of the largest of the Canaries, is so dry that not even a rivulet can be found, but by a wonderful provision of nature, there is a species of tree, the leaves of which are narrow and long, and continue green throughout the entire year; there is also a constant cloud surrounding the tree, which is condensed, and falling in drops keeps the cisterns placed under them constantly full.

The Oreodaphone Californica is a California tree, which is said to give one a headache or it will cure a headache. If you rub its leaves for a short time over your face and hands, it will give you a headache, and if you happen to have a headache the same rubbing will drive it away. It is an evergreen with a strong, spicy smell. If any of our California readers know about this tree, they will tell us if the story is correct.—*Aunt Elmina, in Western Plowman.*

In France all the cows are milked on the left-hand side, and the off horse is always called the nigh one.

Hatched by a Cat.

A remarkable cat lives at No. 93 Fifteenth street, South Brooklyn. From an early age she has displayed a great fondness for hatching out chickens. She sits on eggs like an old hen, until the feathered young break the shell, and then she cares for them as affectionately as if they were orthodox kittens. Four families of chickens have been hatched by this cat, and she is now busily engaged on the fifth, with a very fair prospect of success. The animal is the property of Mrs. Leonard, an intelligent Irish woman, who resides with her husband in a cottage at the above address. A *Herald* reporter called at the house yesterday afternoon to see the wonder. In one corner of the kitchen, partitioned off from the rest of the room, was a large bird-cage, around which a dozen chickens were strutting and picking up a meal. Inside the cage, on a bed of straw, was a cat of unprepossessing appearance, but of stalwart proportions, covering four eggs. The latter were disclosed to view as the reporter approached the cage, and the animal left her nest to play with a chicken. Then she returned to her task, extending her body at full length over the eggs and completely hiding them. The chickens she had already brought into the world seemed to possess as much filial affection as is generally shown by little chicks for their natural mothers, and they pirouetted about the cat in the most familiar way, climbing on her back, enjoying her warm coat of fur, until a movement of her body tumbled them off. After she had become weary of sitting, the cat made a tour among her young, and carried them to different parts of the inclosure. Her method of transportation was by the neck, and the chickens did not seem to mind this kind of transit any more than if they were kittens. She has been very kind to them, and has never made a meal of her offspring. It is related that when her first chicks appeared, she carried one of them by the neck up the cellar stairs. The flesh of the young biped being very tender, and the journey somewhat long, blood soon flowed. Instead of devouring the chick after she had tasted its blood, she applied her tongue daily to the neck until the wound healed. The cat came to Mrs. Leonard's house about a year ago, unheralded and unknown, and the next day was found on a nest of eggs, deserted by a hen who should have been sitting. She was driven off repeatedly, for fear she would break the eggs; but, persisting in her purpose, brought forth a brood of chickens that astonished the household. About a score of chickens have been brought into the world through her agency.—*N. Y. Herald.*

The skeleton of a man nine feet one inch in height is said, by the St. Louis *Globe-Democrat*, to be on exhibition at the office af a firm in Thayer, Oregon county, Mo. The skeleton was found in a cave situated nine miles from Thayer.

THE KANSAS FARMER

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KANSAS FARMER CO.,
Office, 273 Kansas Avenue, Topeka.

New Advertisements.

Attention is called to the new advertisements appearing in this paper, and when writing please mention that you saw their advertisement in the KANSAS FARMER. By so doing you not only benefit us, but you also benefit them, for they are interested in knowing where their advertisements do the most good.

Local Notice—Collar Pad for Horses.
M. W. Dunham — Percheron-Norman Horses.
Ely Bros.—Ely's Cream Balm.
Standard Manufacturing Co.—Fences.
Bates & Embry—Clydes at Auction.
H. H. Warner & Co.—Tricks on the Tracks.
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Mrs. S. C. Montgomery—Mammoth Bronze Turkeys.
J. R. Fuller—$25 Reward.
F. Barteldes—Kansas Seed House.
L. W. Mickey—Public Sale 160 Cattle.
S. R. Edwards—Poultry Card.

Only 25 Cents.

Send in 25 cents and take the KANSAS FARMER the rest of the year 1885.

We hope our friends will not forget to send us names of friends and acquaintances who ought to tak the KANSAS FARMER and do not. We want to send sample copies to them.

Frauds were so extensive at the recent election in Cincinnati that a committee of one hundred citizens of both parties have organized to prosecute the offenders. A large amount of money has been subscribed to assist.

A Chicago dispatch dated October 21, says a foot of snow is reported from nearly all parts of the northern peninsula of Michigan, blockading the railroads. There was a slight fall of snow at Galena and Monmouth, Ills, yesterday

The committee appointed at the Fourth Ensilage Congress have arranged for holding the Fifth Ensilage Congress at Grand Central Hotel, New York First session at 10:30 o'clock a. m., January 20th, 1886 The annual dinner the same evening

In a French stone quarry last Saturday, while a large body of workmen were engaged in taking out stone, the quarries suddenly fell in, destroying the village situated on the ground above the stone pits, and killing a large number of persons Many are buried in the ruins, and it is doubtful if any of them can be rescued in time to save their lives. Troops have been sent to the scene of the disaster to aid in the work of relief.

KANSAS SUGAR PROBLEM SOLVED.

The KANSAS FARMER has advocated State and Government appropriations in aid of experiments to establish the sugar industry in Kansas. Our State Legislature listened respectfully to appeals, but it did nothing. Senator Plumb, however, was more fortunate at Washington; or, more properly, through his efforts Kansas was more fortunate in the Congress of the nation than she was in her own Legislature. Senator Plumb has taken an active interest in everything pertaining to the interests of the State and particularly in relation to the sugar industry. To his efforts more than to those of any other man or number of men is due the solution of the Kansas sugar problem. Not because other men did not work, not because they did not do what seemed to them proper under existing circumstances, for many of them did these things; but Senator Plumb, in addition to his faith in the final success of sugar-making here, exerted his great powers actively in the matter, and by persistent earnestness of appeal succeeded in obtaining an appropriation from the national treasury to aid our people in learning how to make sugar in Kansas a profitable business. And then, after the appropriation he assisted the practical work along by giving to it the influence of his continued effort. As a result of this worthy activity, new works were erected at Ottawa, in this State, for the purpose of testing the diffusion process on a large scale in extracting juice from sorghum cane, and with most encouraging results. The Kansas sugar problem is solved. It has been thoroughly demonstrated in this last effort that sugar-making in Kansas as a commercial success is no longer in doubt. Up to this time, the fact that sugar of good quality could be made from sorghum was fully established, but it had not been demonstrated that the work could be done at a profit to the manufacturer or anybody concerned. The necessary labor was great, machinery was expensive, the season short and then, most discouraging of all, it seemed impossible to get more than one-half the juice out of the cane. In practice the average extraction was little more than 40 per cent. By the new process, the cost of machinery will be less than by the old, less labor will be required, and the juice is about all taken out of the cane. The percentage left is not worth talking about. This much is now established, and as we have frequently predicted, it opens up a field for Kansas farmers of greater profit than anything yet found. It will be worth more than Colorado's mines. Our readers will pardon us if we appear over sanguine. We have been hoping a long time for the ascertainment of the very facts which we now relate. Our faith in Kansas sugar has been as strong as it was in Kansas wheat and Kansas beef; it was such a faith as all of us had in the beginning concerning the final outcome of Kansas in general. The very air was full of inspiring hopes and all of us builded upon them as we would upon the everlasting rocks. And here we are with an empire about us built up in a quarter of a century. So with the sugar industry. Through years of hoping and working have we come to success. And the value of this success is incalculable. It will surely double the profits of thousands and thousands of farmers; and, as we believe, is to be the means of starting a home industry that will supply all our own wants in that direction and successfully compete with products of other nations in the world's markets.

Monday last, the editor of the KANSAS FARMER went to look at the sugar works located near Ottawa under the direct supervision of Hon. W. S. Parkinson, managing director of the Franklin sugar works. The company was organized in the spring of 1883, with Mr. Parkinson as the active man. To him specially is due the organization of the company and the erection of the plant. And it is due to him to add that his pluck and his energy, combined with his abiding faith in Kansas sugar, had much to do with the experiments which have been so successful, being made at Ottawa. The original plant cost about $65,000, and a nearly equal amount has been added since, so that the investment is now about $125,000 About 300,000 pounds of merchantable sugar were made there this year from sorghum cane by the old process, and while that was being done, machinery was put in place for experiments by the new process, known as the "Diffusion Process," under general direction of the Agricultural Department at Washington and looked after specially by Prof. Swensen, assisted by Prof. Hart. The latter named gentleman kindly promised a detailed and accurate description of the new process for our readers, and to forward it in time for the next issue of the FARMER. Briefly it may be described thus: The cane, stripped and headed, is fed at an angle of about 75 degress, or nearly a quarter of a circle, into a cutting trough somewhat like a straw or stalk cutter, the knives cutting perpendicularly, thus cutting off the cane stalks diagonally. The pieces cut off (chips they are called) are about 3-sixteenths of an inch thick. These chips, as they drop, are conveyed by machinery into vessels where they are so thoroughly saturated and washed with water that, by the time they get through all the vessels (called a diffusion battery) the juice is almost all taken out of them and left in the water. Less than 1 per cent. of juice remains. The chips are then dropped onto aprons and carried outside and thrown away for manure or whatever other use they be put to. The juice is then limed, that is, lime water in large proportional quantities is put into the juice and mixed with it, and the mixture is treated with carbonic gas. This lime and carbon treatment is called "carbonatation." It wholly does away with the skum of the old process and the skimming business. Instead thereof it sends the impurities to the bottom of the vessel in a light colored precipitate, resembling soapstone in smoothness of texture, and white lead, a little darkened, in color. This cake, unlike the skimmings of the old process, contains no sugar or saccharine matter. The chemical action of the lime and carbon is to collect the impurities neutralize the vegetable acids in the juice and then remove itself by going to the bottom and there hardening

There was not much sugar made from the juice extracted by the diffusion process and purified by carbonatation, because the time was spent largely in experimenting. But some sugar was made, and a very careful history of every step in the proceedings in all of the different experiments and tests, so that it may be stated safely in general terms: The expense of a plant (ground, factory, machinery, etc.,) for making sugar by the new process, will be less than it was by the old; (no bone black is needed); the necessary labor will be less; the product will be more than double.

A farmer of Linn county was killed a few days ago in a shocking manner. He was in a school house being built near home, and his team was in the yard. The team starting up, Mr. Nungesser went out and caught the horses by the heads, when they wheeled and pushed him against a barbed wire fence with such force that he died in twenty minutes, not speaking after his injury.

Our 25-cent offer is taking well. A considerable number of persons have already availed themselves of it.

By way of showing the value of a good newspaper, we mention an incident. A country woman came into this office the other day to say that her payment of 25 cents for the KANSAS FARMER the rest of the year, had resulted in her reading something in the first number she received that was worth a good deal more to her than the 25 cents she paid.

The American Fat Stock and Dairy Show, to be held at Chicago, November 10 to 19, bids fair to be a very interesting occasion. The addition of dairy products to the fat stock will add greatly to the value of the exhibits. The FARMER acknowledges receipt of a season ticket. We hope to be able to enjoy the time in the spirit if not in the flesh.

The third annual Fat Stock Show at Kansas City commences on Thursday of this week and continues until November 5. This is one of the most instructive and interesting live stock exhibits held in the West, and not only deserves the visiting patronage of farmers and breeders, but merits their hearty co-operation as well. Every western breeder should give the management, at this Fat Stock Show, that substantial encouragement and support, so that hereafter there will be no question as to the permanency of this worthy institution.

The *American Garden* says that manuring with rye is an excellent way to ameliorate and enrich a garden. The advantages of this plan outweigh the expense and labor manifold. After the crops have been removed the ground should be plowed or spaded, harrowed or roughly raked with a prong hoe, then seeded to rye at the rate of two to three bushels per acre and harrowed or raked in. The seed will soon come up, and the green growth presents a cheerful and pleasing appearance all winter when the ground is bare of snow. In spring, just before the land is to be planted again, the rye is turned under. It will soon decay and leave the ground in a mellow and friable condition, which will be perceptible for several years; but there is no reason why such a system should not be followed every year, at least in alternate parts of the garden.

A writer in *Popular Science Monthly* says: "To most people clover is the name of a single thing, or, at most, of two things, purple clover and Dutch clover; but to the botanist it is the name of a vast group of little flowering plants, all closely resembling one another in their main essentials, yet all differing infinitely from one another in two or three strongly marked peculiarities of minor importance, which nevertheless give them great distinctness of habit and appearance. In England alone we have no less than twenty one recognized species of clover, of which at least seventeen are really distinguished among themselves by true and unmistakable differences, though the other four appear to me to be mere botanist's species, of no genuine structural value. If we were to take in the whole world, instead of England alone, the number of clovers must be increased to several hundreds."

Tell your neighbors to try the KANSAS FARMER the balance of the year 1885 for 25 cents.

About Silver Money.

It is not our purpose now to go into a discussion of money theories. Usually that is a profitless work. Many learned men do not understand the financial theories of some other learned men, but ordinary men very clearly comprehend the practical uses of money, and every one of them understands that when he has no money with which to pay for his purchases, he must either go without what he would buy or he must deal on his or on some other man's credit. The best he can do without money is to deny himself or promise to pay at some future time. The common man knows, also, that debt is weight. Every dollar of debt is that much weight saddled on the debtor and he must carry it with him wherever he goes. It is burdensome, it is destroying.

Silver money is the poor man's money. That is to say, that because silver money is made in pieces of small value, it is peculiarly well adapted to the uses of poor people, for their business is always in transactions of small amount in value. Silver is coined in dollars, half-dollars, quarter-dollars and dimes. Half-dimes were discontinued in 1873; nickel 5-cent pieces were authorized in 1866. These small coins furnish poor people means of maintaining themselves against the dangers of the credit system. Whenever men must take "store pay" for their labor or the products of their labor, they are at the mercy of the store men, they who own the stores. The most valuable thing about silver money so far as poor people are concerned is, its division into small values. The total silver coinage of our mints from the beginning—1792 to 1877, was $208,872,291.40, of which amount only $8,045,838 was in dollar pieces. All the rest, amounting to $200.826,453.40, was in the smaller coins; and it is a fact well known to every person who can remember forty or fifty years back that all the money which poor people had before the civil war was in silver coins of small value. They never took paper money when they could get silver, and they preferred it in half-dollars and smaller pieces. The war brought about many changes, and among them the use of paper fractional currency. But there is none of that in circulation now. Go into the dwellings of the common people and you can find silver in small pieces just as it used to be. The paper did well enough for change as long as it was the best we had; but as soon as silver began to circulate again the paper was retired. While all persons prefer good paper money for use in amounts above one dollar, they all prefer silver for amounts less than one dollar. The poor people whose dealings are in small transactions are particularly interested in silver money.

Up to 1853 silver coins of all denominations were legal tender for any amount; but by the provisions of the coinage act of that year, the coins of value less than one dollar were reduced slightly in weight (at the rate of 28¾ grains of standard silver to the dollar) and their legal tender quality removed except as to amounts of five dollars in any one payment. That, so far as we know and believe, did not work any injury to any person. We never heard of a poor man's silver halves and quarters and dimes and half-dimes being refused in payment of any debt. And as long as the dollar piece is not demonetized, (its legal tender quality taken away) we do not see that any serious injury would result from light weight in the small coins and limiting their legal tender functions to twenty-five dollars. However, that is not the point in this article. We would restore the coins as to their weight and their functions to what they were before the change made in 1853.

But the serious matter is what would follow the demonetization of the silver dollar as proposed by those persons who prefer a gold standard. One of the inevitable effects would be to make it more difficult for persons who are in debt to make good their promises, and for the reason that when silver is dishonored, gold will be the standard, and that metal being more and more difficult to obtain, the market values of farm produce must be low. It is urged that silver money is not worth as much as gold money, but that is not true. Silver money will buy as much of anything (except gold) as gold money will buy. It is said that silver money will drive gold money out of circulation, because silver is cheaper than gold. Well, let it drive away. But it don't; there is more gold in circulation in the country than there is of silver, and more than ever there was before. Go to the bank for money, and if you are paid in coin in whole or in part, most of it is gold. It is said, also, that silver bullion is low in the market; so is wheat and pork, corn and cheese, horses and cattle. There is no complaint, however, that gold bullion is low. No, gold bullion is high, and for that reason, if it were made the only basis of our money, money lenders would be benefited while borrowers would be injured. It is said, too, that the silver dollar is not honest money; that it is worth only about 83 cents, and that therefore it ought to be struck out of our list of money coins. That is wholly untrue. The silver dollar is as honest a dollar as a bushel of wheat is an honest bushel or a pound of beef is an honest pound. This is susceptible of absolute demonstration. The constitution authorizes Congress to coin money and regulate the value thereof. Our first coinage act (1792) authorized the coinage of "silver dollars or units—each to be of the value of a Spanish milled dollar as the same is now current, and to contain three hundred and seventy-one grains and four-sixteenths of a grain of pure, or four hundred and sixteen grains of standard silver." Of copper coins two were authorized, cents and half-cents, the "cents—each to be of the value of one-hundredth part of a dollar and to contain eleven pennyweights of copper." The silver dollar, then was to be equal in value to one hundred cents, and to contain 371¼ grains of pure silver. That was in 1792 when the only money we had was foreign coin. The Spanish dollar passed current and it was made the unit of our money. It contained 371¼ grains of pure silver. That was the beginning. Every money contract made in this country since that time was made upon that basis—371¼ grains of silver to the dollar. Gold dollars were not authorized until 1849, and they were simply one-tenth the value of the eagle; they were not to take the place of silver dollars in our currency except in special contracts made by willing parties. It was the act of 1873 that said the gold dollar of 25 and 8-tenths grains of standard gold should be the unit of value, but it did not demonetize the silver dollar. And, though a change was made in the weight of our silver coins in 1837, it was done because the standard of fineness was changed, removing a little alloy, thus reducing the standard weight from 416 grains to 412½ grains, but retaining the original quantity of pure metal—371¼ grains. And that has never been changed. The silver dollar authorized by the act of 1792 contained 371¼ grains of pure silver, and the dollar was made the unit of value. It has so remained to this day. The actual quantity of pure silver in the dollar is the same now that it was in the beginning, and it was never anything else or different. Is not that a clear and perfect demonstration that the dollar is an honest dollar? A bushel contains 64 pints. That was so when our government was organized, and it was never otherwise. Is not that an honest bushel?

The relative values of gold bullion and silver bullion in the beginning (1792) was 15 to 1. The difference is greater now—perhaps as much as 17 or 18 to 1. For that reason it is said that if we do not discontinue the coinage of silver dollars we ought at least to increase their weight. To that it may be said that there is no greater or better reason for increasing the weight of silver dollars than there is for increasing the weight of a bushel of wheat, a pound of pork or a barrel of apples. A dollar is 371¼ grains of pure silver when so determined and stamped by the government.

If we are devoting too much space to this subject, our excuse is its importance. The farmers of America are vastly more interested in this silver question than most of them think they are, and the KANSAS FARMER wants to do its part in disseminating correct information concerning it. Our purpose is to so present the subject as that our readers will have no difficulty in recognizing and properly utilizing the principal facts. We will have a good deal more to say in future and will be as brief as clearness will justify. To adopt an exclusively gold standard will hurt.

Kansas State Grange.

The fourteenth annual session of the Kansas State Grange will be held at Music Hall, Topeka, commencing 10 a. m., December 8, 1885. It is expected that this will be one of the best sessions held for several years. Farmers generally are cordially invited to be present at the public lecture.

Patents to Kansas People.

The following is a list of patents granted Kansas people for the week ending October 24th, 1885; prepared from the official records of the Patent office by Mr. J. C. Higdon, solicitor of patents, Diamond building, Kansas City, Mo.:

Longitude and time—Daniel C. Young, of Hanover.

Device for catching hogs—Frank M. Scrafford, of Seneca.

Oil cup—Albert L. Swift, of Leavenworth.

Sulky plow—John E. Porter, of Weir City.

"One Shine a Week."

A colored boy that makes his living by blacking boots in Topeka came into the KANSAS FARMER office a few days ago and inquired whether he would be permitted to subscribe for the FARMER and pay for it by work at his trade. He said his father is farming and lives at or near Tecumseh—a few miles east of Topeka. His father needs the paper, he said, and he, the boy, would read it to him. His name was put on our subscription books, and his first report was that his father is very much pleased with the paper because it "tells about hogs and things on a farm."

If that boy continues as he has begun, and behaves himself orderly and well, he will own a farm of his own some day. The information that he and his father and their listening friends will get out of the paper will be worth a great many dollars to them. "One shine a week" will prove to have been a very good investment.

Inquiries Answered.

INSURANCE.—This office is not in possession of any information concerning the responsibility of the Southwestern Mutual Benevolent Association, and therefore do neither recommend nor condemn it.

ENLARGEMENT OF BONES.—I have a young mare, 4 years old, in good health and condition, in foal. I have lately seen an enlargement of the bones of the face, on each side about midway between and a little in front of a line from the eyes to the nostrils. Some say it is the big-head; if so, can it be cured, and what will be the result if it is not cured? Can you give a remedy, and how long will it take to cure it?

—If you know of a good surgeon within reach, let him look at the case and give his opinion. It may be natural, in which case, of course, nothing is to be done. It may be an abnormal formation which the surgeon will tell you how to scatter and get rid of. If there is no one that you can call to your aid, feed wheat bran and as light a diet as you can make out of ground stuff and good hay, so as to keep the bowels rather loose and not produce fatness. If the enlargement does not increase, or if it decreases, you are on the right track; but if it increases, or if discharges come from the nose, and the eyes begin to water and look dull, if you can get rid of her without cheating anybody, do so.

STONY LAND.—I have some stony land, too stony to plow, on the sides of hills. Can I make timber grow on it? If so, how, and what kinds would be best?

—If we had a photograph of the particular land so that we could get as correct an understanding of the situation as our correspondent has, we could answer readily. As it is, we cannot. If the stones are large, flat rock in layers, there is no use in putting anything there. If the stones are small and loose enough to be removed and leave good earth, walnut, cedar and hickory would do well there, and grapevines would do well with proper care. The things to be determined are as to the size, number and looseness of the stones and the character of the earth among them. For trees there must be earth for the roots to grow in. You cannot make a tree grow among rocks or stones that lie close together in large quantities. If you can get to an earthy spot where the roots are always secure in a reasonable amount of earth, rocks do no harm. But you must have earth. Exercise judgment, and if the place is very stony and very dry and you do not intend to remove the stones, there is no use in wasting time planting trees there. But if you can get a good place to start some walnut and hickory sprouts, try it. It won't cost anything but a little time well spent.

TAYLOR NURSERIES.—I would like to know whether there is a nursery at Topeka of L. R. Taylor & Co. Their agent was through here and sold me and my neighbors a lot of fruit trees to be delivered the 3d of November, and now we hear there is no such nursery there; that they are a fraud and would cheat us out of our money. Their agents said they had 200 acres in nurseries and had the names of a great many business men of Topeka to recommend them. Please let me hear from you right away before the trees come.

—There is such a nursery—and a large one, and so far as we know and believe a good one and well conducted, at Topeka, managed by L. R. Taylor & Co. At any rate, Mr. Taylor is the active man. We have been written to frequently about the agents of this nursery. The editor of the FARMER, more than a year ago, went in person to Taylor's nurseries and examined them, finding everything in good condition, and the fact was so stated in the FARMER at the time. The Taylor nurseries do not advertise with us, hence we have no interest in them in any way, but we wished to see for ourselves and for the information of our readers. We have just read of a parallel case which the editor of the *Western Rural* has on hand, and we copy what he says about it, for it is very much like our Taylor & Co. case. The *Rural* editor says: "We still say that the Company is responsible and stands well. Yet we do have more complaints against their agents than against the agents of all the other nurseries together; and we wish that Albaugh & Co. would drown or do something else with their representatives that make us so much trouble. It is mighty disagreeable to us whatever it may be to them."

Wanted.

Ten thousand new subscribers to try the KANSAS FARMER the balance of 1885 for 25 cents.

Horticulture.

Raising Trees From Seeds.

This article is prepared with reference specially to trees for lawns, and to be read in connection with our recent articles on the subject of lawns. The trees which we recommend to raise from seeds are the nut-bearing varieties. Trees of these varieties one year old may be purchased at some nurseries, and where they can be obtained conveniently it is not out of order to get them, for at that age the tap root may be removed entire and again set out without injury if the ground is properly prepared for it. But if one raises his own trees just where they are to grow, there is gain all around. Time is saved—a year at least, and we are not left to uncertainties.

Nuts, as a general thing, will not grow after they have become thoroughly dry. They must be planted as soon as ripe, or kept over winter. They may be gathered and spread over rich, mellow ground, and covered say an inch deep with sandy soil and some straw or other litter, then protected from stock and vermin. In spring remove the mulching and as soon as the sprouts appear take up carefully, leaving as much earth as possible about them, and set in place where the tree is to grow. Set two or three inches deep, and if the sprout is not long enough for that, complete the covering when it grows. The starting place of the roots and the trunk ought to be about two inches in the earth. But don't cover the top of the sprout unless it was not yet through the surface when removed. In that case a light covering will not hurt. The better way is to let them remain in their bed until they are about three inches long, for in that case they may be removed more easily and safely, and can be set just as it is desired to set them.

If it is not practicable to plant in the fall, or where squirrels and field mice abound, which are very apt to steal the nuts, it is better to defer planting till spring. To preserve the nuts over winter take a box,—which should not be water tight,—cover the bottom with about three inches of fine sand, spread a layer of nuts over it, cover with sand, and so on, finishing off with a three-inch covering of sand; place out doors and cover with soil. In spring, as early as possible, plant in nursery rows, or in the places where the trees are to remain permanently.

As to walnuts in particular, where they are planted in the fall fresh from the trees, or in spring after having been kept properly over winter, if they are put in the places where the trees are wanted to grow, it is better to put two nuts in a place. Drop them, press them in the ground with the heel of your boot, then cover them at least an inch deep, put a stake there to mark the spot. If both nuts send forth sprouts, remove one, and set it some other place in the lawn or on the farm.

We do not advise starting trees (for lawns) on the lawn grounds. That does well enough where a grove is to be set out or a forest, but for a lawn we prefer more careful and more successful methods. We would sprout the nuts in a bed and transplant where the trees are three or four inches long.

The seeds of parsley are very slow in starting—often remaining in the ground several weeks before the plant appears.

California fruit-growers assert that apricots bleached with sulphur fumes are superior to those dried otherwise or canned.

If you have a field too rocky to be cultivated, set out an apple orchard, and in a few years you will have a handsome income from it.

Grass for Lawns.

Red top is often used on heavy soils. White clover, also is used. But our preference is Kentucky blue grass, and we admire a sprinkling of white clover with it. The contrast made by little clusters of clover heads, where allowed to appear, is very pretty; and the contrast of leaves alone is a pleasing relief. But very little of the clover seed should be used, for if it gets the start of the blue grass seed, it is difficult to get the mistake righted. Let the blue grass start ahead and there is no danger. The best seed should be used. Purchase from a reliable dealer only, and buy fresh seed, that is seed of the last harvesting, and get it clean. Don't sow weed seed. Get pure, clean seed, and then put it on thick. The ordinary field sowing requires two or three bushels seed per acre. For a lawn, let this quantity be doubled. Sow at least four to five bushels. There is not much danger of getting it too thick, but there is danger of getting it too thin. Lawns are not meadows. In lawns we want a dense sod, that when we walk over it we are reminded of carpeting on cotton foundation. Sow in the spring early as it would be safe to plant corn, say about the time spring showers set in, during the first half of April in Kansas. Have the ground soft and clean, and sow when it is not so wet as to stick to the feet or to tools. Sow thick, remember, then cover with rake, brush or very light harrow, and roll if the lawn is large. A door yard lawn, that is, a small piece of ground, may be made sufficiently compact by running a garden roller over it, or by patting it with the back of a shovel, a spade, or by laying a board down and walking over it, then repeat the operation by moving the board its width after every tramping. The thing to be done is to get the ground pressed down on the seed so as to prevent loss from the soil drying out.

Let the young grass grow until it is well started. An early sowing will give a fine growth of green by the middle of June; but it will not be best to commence mowing before the first of July, and even then the lawn mower should be set to cut as high as it will admit. After a while, the cutting may be closer, but it is never advisable to cut very low. After the first cutting, rolling will make a smooth surface and assist the stooling of the plants. The person on the ground will know best. The object of mowing is to encourage root growth. Blue grass roots grow out laterally and send up new shoots, just as strawberry runners above ground do. Mowing also prevents the grass from going to seed. It also checks the growth of weeds. The mowing the first year must be made to depend upon these considerations. And the mower should not be set very low the first year. Let the cuttings lie as they drop from the machine, then roll. The cut grass serves as mulch. Use a lawn mower if you can procure one.

If any bare spots appear, sow fresh seed on them about wheat-seeding time, and rake it in. If it does not catch, dig in a little good lime, and in the spring sow again.

The question often occurs, At what height can men live? A recent traveler in Asia, Mr. Webber, states that in the mountains of Thibet he lived for months at the height of more than 15,000 feet above the ocean, with the following results: His pulse, normally only sixty-three beats per minute, seldom fell below 100 beats per minute during the time he lived in that altitude. His respirations were often twice as numerous as under ordinary circumstances. A run of 100 yards would quicken both pulse and respiration more than a run of 1000 yards at the sea level, and the higher the altitude at which he resided, the greater he found the difficulty of walking or running fast.

The Poultry Yard.

Preserving Eggs.

According to the Third Report of the United States Butter and Cheese Association, large dealers preserve eggs by the following process:

To make the pickle, use stone lime, fine salt and water, in the following proportions: One bushel of lime, eight quarts of salt, twenty-five ten-quart pails of water. The lime must be of the finest quality, free from sand or dirt—lime that will slake white, fine and clean. Have the salt clean and the water pure and sweet, free from all vegetable or decomposed matter.

Slake the lime with a portion of the water, then add the balance of the water and the salt. Stir well three or four times, at intervals, and then let it stand until well settled and cold. Either dip or draw off the clear pickle into the cask or vat in which it is intended to preserve the eggs. When the cask or vat is filled to the depth of fifteen or eighteen inches, begin to put in the eggs, and when they lie, say about one foot deep, spread around over them some pickle that is a little milky in appearance, made so by stirring up some of the very light lime particles that settled last, and continue doing this as each lot of eggs is added. The object of this is to have the fine lime particles drawn into the pores of the shells as they will be by a kind of inductive process, and thereby completely seal the eggs. Care should be taken not to get too much of the lime in, that is, not enough to settle and stick to the shells of the eggs, and render them difficult to clean when taken out. (The chief cause of thin, watery whites in limed eggs is that they are not properly sealed in the manner described. Another cause is the putting into the pickle old, stale eggs, that have thin, weak whites.) When the eggs are within four inches of the top of the cask or vat, cover them with factory cloth, and spread on two or three inches of the lime that settles in making the pickle, and it is of the greatest importance that the pickle be kept up continually over this lime. A thin basin (holding about six or eight dozen eggs), punched quite full of inch holes, edge muffled with leather, and a suitable handle about three feet long attached, will be found convenient for putting the eggs into the pickle. Fill the basin with eggs, put both under the pickle and turn the eggs out; they will go to the bottom without breaking.

When the time comes to market the eggs, they must be taken out of the pickle, cleaned, dried and packed. To clean them, secure half of a molasses hogshead, or something like it, fill the same about half full of water. Have a sufficient number of crates of the right size (to hold twenty or twenty-five dozen eggs), made of laths or other slats, placed about three-quarters of an inch apart. Sink one of these crates in the half-hogshead, take the basin used to put the eggs into the pickle, dip the eggs by raising it up and down in the water, and if necessary to properly clean them, set the crate up and douse water over them; then, if any eggs are found, when packing, that the lime has not been fully removed from, they should be laid out and all the lime cleaned off before packing. When the eggs are carefully washed, they can be set up or out in a suitable place to dry, in the crates. They should dry quickly, and be packed as soon as dry. In packing, the same rules should be observed as in packing fresh eggs.

Vats built in a cellar, around the walls, with about half their depth below the surface, about four or five feet deep, six feet long, and four feet wide, are usually considered the best for preserving eggs in, although many use and prefer large tubs made of wood. The place in which the vats are built, or the tubs kept, should be clean and sweet, free from all bad odors, and where a steady, low temperature may be maintained—the lower the better, that is down to any point above freezing.

DESICCATED EGGS.

The preserving of eggs in any manner has met with but partial success, and, in most instances, total failure, up to the present time, but now Chicago takes the lead, as usual, and is able, with improved machinery that has been tested within the last few weeks, to desiccate from five to twenty thousand dozen eggs per day in such a manner as to keep them for any number of years in any climate. The amount desiccated could be doubled with little expense, and, in this manner, immense quantities will be canned when the market is low. The eggs are preserved simply by evaporating that portion which causes decomposition and decay, leaving the yolk and albumen, or the egg itself, in a rich, golden-colored granulation, which can be used in cooking at any time by adding water or milk, according to directions, to the desiccated egg, in which it readily dissolves in from three to five minutes. The difference between this egg and a fresh egg cannot be detected, as it is nothing else than a fresh egg. By this method it is impossible to preserve limed eggs or eggs that are even slightly stale. England and other countries import millions of eggs annually, and their importations increase with each successive year. The shipping interests and the armies of the world will find one more luxury added to their bill of fare. The West now competes with the Eastern and Middle States and Europe in almost everything pertaining to the table, and this will only add one more article to the list.—*Prairie Farmer.*

Poultry Notes.

Sulphate of iron in water is of incalculable benefit to fowls.

A flock of twenty-five hens, well cared for, is more profitable than 100 hens that are made to shift for themselves.

Give the hens all the skim milk and buttermilk that you can. They will repay you for it fully as well as will the pigs.

Be sure and sprinkle a little pulverized charcoal about the poultry quarters. The fact that it soon disappears is evidence that more is required.

Spade up a few feet of your poultry runs every day, and you will be surprised to see the number of worms and bugs the chickens will get.

In the care of eggs, while waiting for hatching, a place is preferred that is neither hot or cold, damp or dry. If the eggs are to be kept but a little while, turning them over every day will answer, any box or basket being sufficient.

Mr. Wm. Stewart, of South Dunfries, Can., has concluded to try the experiment of introducing the prairie chicken on his farm. With this object he ordered eggs for hatching from the West. The experiment will be watched with much interest.

Fumigate the building with sulphur to kill lice and mites, twice a month, if necessary. There are in every flock individual hens that are better layers, better sitters, or better mothers than their companions, and by continued selection of eggs from these best fowls one can mold the breed according to his tastes or desires. The sitting or non-sitting propensity can be bred in or out of any breed by judicious crossing and selection.

In the Dairy.

How to Construct Cheap Dairy Buildings.

The following description of a cheap dairy house is from the pen of Prof. L. B. Arnold in the columns of the *National Live Stock Journal*, Chicago:

For the purpose of doing practical work in the dairy for illustration before the agricultural students, and for working up the milk of fifteen or twenty cows, produced on the farm, when it is not wanted for other purposes, a small dairy house 16 by 24 feet, a story and a half high, has just been completed at Cornell University, and work started in it. As the mode of constructing the floor and walls, and plan of refrigeration, varies somewhat from the usual method of building, the readers of the *Journal* may, perhaps, be interested in a description. Special pains have been taken to secure perfect cleanliness and freedom from tainted, musty, sour, or decaying floors, and to guard against uncertain results from changes of temperature by reason of thin, or open walls, through which heat and cold and wind could pass, as is so commonly the case in creameries and cheese factories.

The building stands on a grout wall, made of water-lime, sand, and cobble stones, reaching down below frost and rising a trifle above the surface of the ground, the site having sufficient elevation to admit of easy drainage. The floor rests on the ground, and is made by grading the earth with an incline from all parts of the foundation wall to the point of drainage, which is large enough to admit of flooding the floor *ad libitum*. The foundation of the floor is made by covering the grading with cobble stones, and pounding them down so firmly as to make the floor perfectly secure from settling, the stones being levelled off by pounding gravel between them. This foundation was then covered with German cement, thick enough to make it secure under any pressure there may be occasion to put on it, the outside edges of the floor rising just above the top of the foundation wall. The surface of the floor is very smooth and of rock-like hardness, making it easy to keep clean. Its connection with the ground gives it a low and even temperature, and secures against currents of foul air, and against frost and outside heat. A balloon frame rests upon the ground wall, and the enclosing walls are doubled to secure an even temperature within. The studs, which reach to the plate, are set flush with both sides of the sills, and are covered inside and outside with air-tight paper, with a course of paper in the middle of the space between them, which is tightly fastened to the center of the studs by means of cleats snugly drawn down with heavy nails, so as to make an air-tight partition between the walls of paper on the inside and outside of the studs. Inch furring is put on over the paper on all the studs, both outside and inside, and snugly nailed. Clapboards are nailed on the furring outside, and matched boards of Georgia pine, sound and narrow, are nailed horizontally on the inside furring, making five coverings, enclosing four dead-air spaces, if the space between the clapboards and paper may be counted as a dead-air space, which it is approximately. Overhead, the joists are covered above and below with paper, and narrow, sound, matched pine, the same as on the sides, making a tight ceiling and chamber floor. The rafters are also covered with paper, and sided in the same way. By raising the rafters so as to leave a space between the roof boards and plates, any heat which may penetrate through the roof will be carried off by a current of air passing up between the rafters and out through a ventilator connected with the garret. A partition sets off, at one end, two-fifths of the lower story for a creaming room, and the doors are built the same as the sides, with three courses of paper and two of boards on furring. With the windows close fitted and double glazed, this building is prepared to withstand changes of weather. Neither summer's heat nor the winter's cold can make more than a faint impression upon five tight walls with four dead-air spaces between them, and the ups and downs of the passing season are not felt at all. This is just what is required in every cheese factory and creamery, and a very important consideration in this little structure is that it is comparatively inexpensive. The floor and foundation walls are made of cheap material, and with unskilled labor, and paper, at a trifling cost, is made, simply by skillful arrangement, to do the chief work of protection above ground. The woodwork inside is simply varnished, giving it a neat look and making it easy to keep clean, and the outside is well and tastefully painted, making the structure in all respects a model of neatness, efficiency, and economy.

In the erection of this building for practical use and public example, the University has done a good thing for the dairy industry by way of showing how easily and cheaply buildings suitable for dairy purposes, of which there is a pressing need, can be constructed. It has done another good thing in putting an expert into it to put the department into successful and complete running order, and it has taken another good and important step in voting an appropriation for employing a professor next winter, to give instruction by lectures, accompanied with practical work, and for furnishing him with a variety of appliances for illustrating both principles and practice. This is clearly a much-needed step in the right direction.

Dairy Notes.

The Poland, Maine, creamery, making 1,000 pounds of butter per week, receives 3¾ cents per pound for labor, including the collection of cream from patrons.

From the milk records of the Michigan State farm, the average annual yield of six Short-horns was 5009.16 pounds; of six Ayrshires 8525.33 pounds, and of two Jerseys 4919.5 pounds.

Mr. T. D. Curtis, of Syracuse, said that in a drove of Holsteins the best milkers were the ones which had the most white on their bodies. The whites were the milkers, and the blacks had the good constitution.

A large majority of men like to see their milking cows look in good condition—even fat; but you may take it as a certain fact, that if milking cows put the fat on to their backs they are not putting it into the pail.

There were received in Chicago during the year 1884, about 19,700 tons of cheese, against 23,927 tons for the year 1883. The receipts of butter were 41,700 tons, against 37,667 tons for 1883. —*Farm, Field and Stockman.*

The Philadelphia *Record* remarks that the connection between good grass and good butter is very close, and no matter how well bred the cattle may be it is impossible to make good butter with poor pasturage. Few farmers have the technical knowledge of soils and grasses called for in making permanent pastures, hence it is often done in a careless manner. The land should be put in the best condition, and the seed should be sound, clean and free from weeds, and composed of varieties necessary to afford pasturage throughout the entire season.

A writer to an English journal says: I have been used to the Ayrshire cow in her native country, and now have a herd in the south. I have seen her tried side by side with the Short-horns and some other breeds, and I have no hesitation whatever in saying that, taking the cost of production into account, the Ayrshire is the best all-round dairy cow in the British Islands.

The meanest thing to do to a cow, however, is to call her a gosh darned fool, thinks a correspondent of the New York *Times*. That hurts her feelings and makes her wish she had been eaten when she was a veal. Some cows are that mean by nature that when you go to milk them they hump their backs up and try to hold their milk in. The proper thing to do in this case is to give her a thump in the middle of the back with your fist. When you have done it just once you will realize that a cow's back is shaped like the roof of a house, and that her spinal column is the ridge pole, but your hand will get well in a week or two, and you will have the satisfaction of feeling that you know more about bovine anatomy than you ever did before you hit her. Experience is a great teacher.

The Busy Bee.

Preparing Bees for Winter.

Mr. F. S. Dougherty, in Indiana *Farmer*, discusses the subject as follows:

The question of safe wintering of bees is probably the most important subject among bee-keepers, and is less understood than any other part of the business. There are many who winter their bees very successfully, but their plan in other hands or in different localities makes utter failures. Again the same plan may be followed year after year with perfect success, when from some unknown difference it proves valueless. There are, however, some general features in connection with safety on which most all agree.

The amount of stores necessary for the safe wintering of an ordinary colony of bees should not be less than twenty-five pounds. Some will consume less than others; all will consume less, or more, according to the condition of the winter weather and its duration. The quality of the stores on which they are to subsist has much to do with the probable outcome in the spring.

Another feature, and one which I consider of the greatest importance, is the age of the bees which are to form the winter cluster. I think there can be no mistake but that the life of the bee is governed entirely by the amount of work done, and not by the time consumed in doing it. In localities where no fall honey is produced, bees that hatched during the latter part of June and through July, have but little work to perform, and will last until the latter part of December. No fall honey coming in, but few young bees are reared, which at the death of the older ones, leaves the cluster too weak to withstand the winter. On the other hand, gathering a good crop of fall honey soon exhausts the old bees, but the flow of honey induces brood-rearing, which will leave the winter cluster composed almost entirely of young bees, which, with other favorable conditions, almost insures safe wintering.

I consider protection from dampness more necessary than from the severe cold, as the first condition enables them to resist the latter. There is a moist vapor constantly arising from the cluster. I have seen this carried to such an extent as to completely enclose the cluster in a crust of ice. My experience leads me to believe that the escape or absorption of this moisture is an important necessity, and for this purpose I find nothing better than forest leaves, with which to pack the second stories of hives. Cloths that have been in use on the hives for any length of time become so propolized as to be impervious to water, and consequently I provide an opening to the leaves by turning back one corner of the cloth, but stop any direct upward ventilation by packing the leaves over the opening. In former years, much more so than now, it was my practice to reduce the size of the brood-chamber by the use of division boards, but I do not consider this of any great importance except in the case of very small clusters. By a consumption of the stores on which the bees are clustered, it becomes necessary for the cluster to change position on the combs, and provision for this change must be made by allowing space for the bees to pass from one frame to another. The best point for this is directly over the cluster, and I provide this there by laying short sticks across the frames in such a manner as to keep the cloth from settling down on the top-bars of the frames.

Unhealthy stores are gathered at times by the bees in the vicinity of cider mills and like places. I see the recommendation frequently given to throw this out of the combs with the extractor; but I much prefer feeding additional stores of sirup made from good sugar; this will neutralize the poisonous effect of the juices gathered from frosted plants or decayed fruit.

THE MARKETS.

By Telegraph, October 26, 1885.

LIVE STOCK MARKETS.

New York.

BEEVES—Receipts 4,449 The feeling was better and all desirable cattle sold readily; inferior and common stock ruled dull and closed weak. Poor to prime native steers sold at 3 50a5 76, extra and fancy do 5 85a6 05, with one lot to 6 40

SHEEP—Receipts 23 650. Good to prime stock fairly active; inferior and common dragged and closed weak with a downward tendency, sheep 2 00a4 25, lambs 4 00a5 50.

HOGS—Receipts 2,600 No important changes

St. Louis.

CATTLE—Receipts 1,000 shipments 700 Market slow and weak with a local demand Native shipping steers 4 00a5 20 native butchering steers 3 20a4 40, mixed lots ranged at 2 00a3 50, Texans 2 40a3 25.

HOGS—Receipts 3,500, shipments 5,800. Market active and steady. Packing 3 45a3 60, Yorkers 3 65a3 70, butchers 3 65a3 75

SHEEP—Receipts 500 shipments 600. Good muttons in demand but other grades dull. Common to medium natives 2 00a2 50, good to choice 2 60a3 25, Texans 1 75a2 75, lambs 2 25a3 50.

Chicago.

The Drovers' Journal reports:

CATTLE—Receipts 7 600, shipments 2 500 Market steady. Shipping steers 3 25a5 50, stockers and feeders 2 00a 50; cows, bulls and mixed 2 15a3 00, through Texas cattle weak at 2 50a3 50, Western rangers steady, natives and half-breeds 3 50a4 00.

HOGS—Receipts 26,000, shipments 8,000. Trading slow. Rough and mixed 3 35a3 60, packing and shipping 3 50a3 8 , light weights 3 50a3 85.

SHEEP—Receipts 2,600. Market slow. Natives 1 75a3 40, Westerns 1 75a3 00, Texans 1 50a2 50.

The Drovers' Journal special Liverpool cable quotes best American cattle at 11½c per pound dressed, or 1c lower than prices have been since the American export trade began.

Kansas City.

CATTLE Receipts since Saturday 4,420 Sales ranged 2 75 for grass Texas steers 4 40 for native feeders.

HOGS Receipts since Saturday 3,941 The offerings to-day were moderate and the market firmer with values 5c higher than Saturday. Extreme range of sales 3 30-3 6 bulk at 3 42½a3 45

SHEEP—Market quiet Sales, 100 stock at 1 00 each.

PRODUCE MARKETS

New York.

WHEAT—No. 2 Chicago 92a93c, ungraded red 81a97½c No 3 red 93c No. 2 red 95½c.

CORN Ungraded 45a52c. No 3 50c No. 2 52a52¼c

St. Louis.

WHEAT Sales: No. red cash 95½a96c, October 92⅝c.

CORN Firmer and irregular. No 2 mixed cash 38a38¼c

OATS—Firm but very slow No 2 mixed, cash 24⅝c, May 93¼c.

RYE—Dull and lower to sell; 60⅝c bid for regular.

BARLEY—Dull and unchanged. Prices ranged at 55a 8c

Chicago.

WHEAT Opened at ¼a½c higher on war rumors, sold off ⅞c on reports of large receipts at the Minneapolis mills, started up again on good buying, both on local and outside account, and closed ¾c higher than yesterday Sales ranged: October 83⅞ 85¼c. November 84¼a85⅝c, December 86¼a87¾c, May 93¼a95c, No. 2 spring 84⅞a85½c. No 3 red 79½c.

CORN—The market ruled fairly active and firmer, somewhat in sympathy with wheat, closing ½a¾c higher Cash 41⅜c, October 41⅛a41⅝c

OATS Steady and firm. Cash 25c, October 25⅛ 25¼c.

RYE—Steady. No. 2 at 61c.

BARLEY Quiet No. 2, 66.

FLAXSEED—Easy, at 1 16 for No. 1

Kansas City.

WHEAT—The market to day on 'change was weaker and values lower On the call No. 2 red was entirely nominal. Before the call No. 2 red December sold at 76¼a76½c against 77c bid at urday, when 99⅝c was asked May sold at 86½c against 87½c bid Saturday when 87½c was asked. No 3 red was nominal except for October, which sold at 61c.

CORN—No. 2 corn: Cash, 28c bid, 27¾c asked; October, 28c bid, 29c asked; November, 26c bid, 27½c asked.

OATS—October, 20c bid, 22½c asked.

RYE—No. 2 cash 51c bid.

BUTTER—Moderate receipts and demand good for choice; other grades dull. We quote: Creamery, fancy, 24a25c; good 20c; fine dairy in single package lots, 18c; storepacked, in single package lots, 10a14c; common, 4a5c.

EGGS—Receipts light and market firm at 16c per doz fresh re-candled.

CHEESE—We quote: Full cream, 11c½; part skim flats 9c; Young America 11½c.

POTATOES—Irish potatoes, choice and of one variety, in car load lots, 40c per bus. Sweet potatoes, red, 50c per bushel; yellow, per bushel, 60a75c.

APPLES Receipts lighter and market steady at 1 75a2 25 per bbl. for best; common to medium, 1 00a1 50

BROOM CORN—We quote: Hurl 4a5c, self working 3½a4c common 1½a2c, crooked ¾a1¼c.

HAY—Receipts 30 cars. Best weak; low grades very dull. We quote: Fancy small baled, 6 00; large baled, 5 00; medium small, 3 75; large, 3 25; common, 75a3 00.

OIL CAKE—₱ 100 lbs. 1 25, ₱ ton 24 00, free on board cars

FLAXSEED—We quote at 1 05a1 08 per bus. upon the basis of pure.

CASTOR BEANS—Quoted at 1 60a1 65 per bus.

WOOL Missouri unwashed, heavy fine, 15a17; light fine, 19a21c; medium, 19a21c; medium combing, 21a22c; coarse combing, 17a19; low and carpet, 12a15c. Kansas and Nebraska, heavy fine, 15a17c; light fine, 19a21c; medium, 19a21c. Tub washed, choice, 32a34c; medium, 28a30c; dingy and low, 23a26c.

THE STRAY LIST.

HOW TO POST A STRAY.

THE FEES, FINES AND PENALTIES FOR NOT POSTING.

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

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

Unbroken 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 up, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

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

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

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

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

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

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

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

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

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

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

Strays for week ending Oct. 14, 1885

Crawford county--Geo. E. Cole, clerk.

COLT—Taken up by W. A. Cole, of Washington tp. September 21, 1885, one 1-year-old gray mare colt, both hind feet white; valued at $60.

COLT—By same, one 1-year-old bay mare colt, left hind foot white; valued at $35.

MULE—By same, one 2-year-old black mare mule; valued at $65.

MULE—By same, one 2-year-old sorrel mare mule, hog ring in right ear; valued at $60.

Strays for week ending Oct. 21, 1885.

Barber county--Robt. J. Taliaferro, clerk.

MARE—Taken up by L. T. Walker, of Sun City tp. October 2, 1885, one dark brown mare, 6 or 7 years old, fine split in left ear, blotch braud on left thigh, collar marks, tail broken down at root; valued at $50.

SOW—Taken up by James Huffaker, of Medicine Lodge tp., September 23 1885 one white spotted sow, 18 months old, no marks or brands; valued at $8.

Kingman county--Chas. Rickman, clerk.

GELDING—Taken up by M. E. Bane, of Eureka tp., October 12, 1885, one dun gelding, 15 hands high, no marks or brands; valued at $30.

Osage county—C. A. Cottrell, clerk.

BULL—Taken up by J. N. West, of Superior, September 29, 1885, one dark red bull, 3 years old, white on belly in forehead and on lower half of tail, no brands; valued at $25.

COLT—Taken up by N. E. Young, of Agency tp., October 5, 1885, one bay pony colt, male, all feet white, star in face, lame in left shoulder; valued at $15.

Jefferson County.—J. R. Best, Clerk.

BULL—Taken up by David Jones, of Osawkee, September 25, 1885, one red bull, 7 or 8 years old, ring-bone on left front foot or leg above the hoof; valued at $25.

Strays for week ending Oct. 28, 1885.

Reno county—W. R. Marshall, clerk.

6 HOGS—Taken up by W. P. Dixon, of Reno tp., September 29, 1885, six black hogs (barrows), weight 140 pounds each, no marks; valued at $25.20.

HORSE—Taken up by B. Parker, of Reno tp., September 14 1885, one light bay horse, 10 years old, sway back, three white feet; valued at $30.

Harvey county—J. C. Johnston, clerk.

STEER—Taken up by James Walton, of Harvey tp., (P. O. Newton), October 3, 1885, one red yearling steer, notch in right ear; valued at $14.

Wabaunsee county—H. G. Licht, clerk.

HORSE—Taken up by Dora Hupe, of Kaw tp., (P.O St. Marys, Pottawatomie Co.,) October 17, 1885, one iron-gray horse, past 3 years old, no marks visible.

Ottawa county—W. W. Walker, Jr, clerk.

MARE—Taken up by A. C. Farrow, of Sheridan tp., one bay mare, 2 years old, 13 hands high, hind feet white, bald face branded A on left hip and shoulder; valued at $30.

The Veterinarian.

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

FOR URINARY DIFFICULTIES.—Use a strong decoction of green briar (a dark green plant with plantain-shaped leaves, grows over the briar bushes and even trees, to which it fastens with tendrils the same as grape vines, the body near the ground being thickly studded with small black prickers, similar to the point of a cambric needle, and about three-eighths of an inch long), feed for one week, three times a day, all that can be soaked into a feed of oats and wheat bran—no danger of an overdose. I have cured cases where sweet spirits nitre in less than three-ounce doses would have no effect, as well as those where nothing but blood was passed, and have never known a recurrence of the disease.

NAIL IN HORSE'S HOOF.—Last spring one of my horses ran a nail in his left hind foot. I never noticed it till the next morning, when he appeared to be lame. In cleaning the hoof, I found a rusty nail which had entered the hoof at the lett side of the frog, about three-fourths of an inch, that part being entirely free from rust when drawn. I am positive I got the entire nail out. I washed the hole out with water, and then put a little turpentine in; it being Sunday, I never thought it necessary to bother the hoof-smith with it. As he was still very lame Monday morning, I had the smith pare the hoof down to the bottom of the hole (as he thought). He then put in some unravelled hemp rope saturated with pine tar; the matter ran very well for about two weeks, but then could not be started again, and a bunch raised on top of the hoof, which broke out after a few days, and discharged a large quantity of matter. I syringed the wound out three times a day with diluted carbolic acid (1-20), and applied carbolic acid and linseed oil (1-6) externally. It soon healed up, but a few weeks later it broke out again, and so half a dozen times. All the time the horse was more or less lame. Since cold weather came, it did not break open, but the horse was still unfit for use. About two weeks ago I had his hoof trimmed again, and the smith found the old hole; when opened a little whitish matter ran out. I again put some tow and tar in, and am thinking of having a piece of leather and a shoe put on. I do not think there can be anything in the foot. The horse ran on pasture until cold weather; since then only enough for exercise. There is no veterinary surgeon in this vicinity. What would you advise me to do?

[Such cases are common where proper treatment is not pursued; but it is seldom one undergoes treatment so long. Generally the horse is destroyed in two or three months. The sole in the first place should have been well pared out and a good opening made for the exit of pus on that Sunday. Then the foot should have been soaked an hour in warm salt water, as hot as he could bear it. This followed by the application of a stimulating liniment twice per day to sore, such as spirits of turpentine, 4 oz.; linseed oil, 3 oz.; compound tincture aloes, 2 oz.; mix. No tar or acid should be used in such cases, and the reason is patent to any person reflecting upon the facts, viz.: All such so-called remedies plug up or seal over the place that should give vent to the discharges which result from inflammatory processes set up by the injury, and one drop of pus that is refused exit below will surely find its way through the foot to the coronet—thus a sinus is formed and fistula is created in all directions. Ninety-nine per cent. of blacksmiths apply acid to the wound, then pack it with tar and oakum. This is irrational treatment and never should be used. You must cut out all the horny sole as far as pus has made a hollow underneath, then soak foot an hour in hot water, after which twice a day wet the parts with hom. tincture calendula, 1 oz.; water, 1 qt.; mix. Apply golden blister around foot above hoof where swollen, and repeat every two weeks.]

This, That and the Other.

"Mother Hubbardville" is the name of a Georgia railway station.

An Ohio man rubbed liniment on a horse with a sore finger and is poisoned. We have often noticed that horses with sore fingers are very dangerous.

The superior court of North Crrolina has decided that a railroad company can not force a passenger to ride in a smoking car if he does not desire to do so.

The Toronto *Globe* tells of a young man who went to sleep the other night without removing his collar, which was very high. In the morning he was found dead. He had been choked to death by the collar.

There is an old fellow in Georgia who has the same "stock" of fire on his hearth that he kindled in 1842. A match-dealer would make a poor living in this part of Georgia, as the people are opposed to such new-fangled notions.

In several villages of the Viatki province in Russia, the peasants manufacture wooden watches, which work steadily, though they do not keep very accurate time; all the parts of the watch are of wood, except the axles, which are of horn.

"I have noticed," said a brakeman, "that no two engine bells ring the same note. This seems rather strange, too, for they are all made of precisely the same metal, are cast in the same mould, and manufactured in the same factory.

F. Houghton, of Corning, Tehama county, Cal., will soon have probably the largest poultry farm in the world. He has nearly 5,000 hens, and has his hen-houses built on sleds, so that he can move them from place to place on his wheat stubble.

A land agent at Rome, Ga., received a few days ago an order for 100,000 to 500,000 acres of desirable farm land, in a solid block, to be interspersed with timber, but not all forest. These lands are said to be for immigrants, and the order comes from London.

A Bostonian cures the morphine habit with this recipe: "Every time she takes a dose of morphine out of the bottle let her put in its place the same amount of pure water. This gradually weakens it, and almost before she knows it the craving is gone."

The population of London in 1881 was 4,764,312, the increase since 1871 having been 22.6 per cent. There are now every week almost twice as many births as deaths, to say nothing of the immigration. One would, therefore, not be far out of the way in declaring that there are in London 5,000,000 inhabitants.

Dr. Lennox Browne, of Chicago, holds that the use of stimulants and tobacco is detrimental to the singing voice, and he has secured the written opinions of nearly four hundred singers, nearly all of whom state that the less the vocalist has to do with alcohol the better. The singers include no Germans or Italians.

The Watertown (N. Y.) *Times* gives a peculiar instance of scarlet fever contagion in the case of a little girl who sent a "dying kiss" on a sheet of paper to a little friend. The latter kissed the encircled spot on the letter, and shortly after died from the disease, the only person sick from it in the place at the time.

A Buddhist temple, burnt twenty years ago, is being rebuilt in Cloto, Japan. It is of most expensive wood, and will cost $3,000,000. More than a ton of large ropes, made of their own hair, contributed by the women of Japan, will be used to haul the timbers from the temple to their places. This temple is to be a Mecca for the faithful all over the Empire.

Somebody says that "man is the only animal that blows his nose." The alligator has a nose nearly two feet long, yet he never blows it. The elephant can reach over his nose and tickle his hind legs, and he often does, but he never blows it. The blue-nosed baboon has a cerulean proboscis of which the noblest animal must feel proud, but it goes unblown. The double-nosed pointer has immense capacity for blowing, but he never will; and the oyster, whose nose reaches clean round to his back, refrains from exercising it. Man alone has to reach to the height of a pocket handkerchief, and he proudly waves his bandanna as a sufficient proof of his superiority.

A Manitoba farmer was sharpening a stake with an axe, when a flash of lightning, accompanied by a single clap of thunder, came from the only cloud visible, a small one immediately overhead. The bolt struck the head of the ax, splitting it into two pieces and breaking the handle. The farmer was knocked to the ground insensible, but speedily recovered, and upon searching about found the fragments of his axe forced deeply into the ground.

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.

$25 REWARD—For the whereabouts of Willie Fuller, who left his home near Glasco, Kas., in July, last. Address information to J. R. Fuller, Glasco, Kas.

FARM FOR SALE.—Address Wm. H. Mills, Emporia, Kas.

A FINE LOT OF PURE-BRED P. ROCK AND P. Cochin Cockerels and pullets for sale at reasonable prices. Satisfaction guaranteed. S. R. Edwards, Emporia, Kas.

600,000 HARDY SILK-PRODUCING MULberry Trees for sale at a trifling cost this fall. Address I. Horner, Sericulturist, Emporia, Kas.

J. P. FARNSWORTH, 62 Tyler street, Topeka, Kas., has for sale Brown Leghorn Cockerels. Prices low.

FOR SALE—Our entire herd of choicely-bred Shorthorn Cattle of the Young Mary, Flora and Arabella families. Price low and terms liberal. Address (and mention this paper) E. C. Evans & Son, Sedalia, Mo.

FOR SALE—One Percheron-Norman Stallion, full-blood, and two Percheron-Norman Grades. Call on or address J. D. Weib, Hillsboro, Kas.

FOR SALE—Seven hundred Merino Sheep. Will be sold in lots to suit purchasers. Said sheep are free from disease. Address J. C. Dwelle, attorney at law, Florence, Kas.

HAVING NO FURTHER USE for "Jumbo 1481" (3-year-old) and "Black Hawk 1799" (2-year old) A. P.-C. Record, we will sell them. They are both "sweepstakes" boars and *first-class* pig-getters. Write for prices. Truesdell & Perdue, Lyons, Rice Co., Kas.

SHEEP FOR SALE.—I have 450 Grade Merino Sheep, mostly Ewes. For particulars address E. T. Frowe, Pavillion, Wabaunsee Co., Kas.