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THE KANSAS FARMER.

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Cheap Drainage, and Beets for Stock.

There is no investment that pays the farmer better than draining his wet land. Now under present circumstances there is little to encourage the farmer to improve his land, as the prices realized for the productions of the farm are so low that in most cases it would pay for the cost of raising, and, in many cases, falls far below it, so that the more the farmer raises the poorer he gets. But this will all cure itself. The farmers in the west are beginning to realize the situation and will secure legislation that will protect them from the harpies that are at present preying on them. In respect to cheap drainage I can speak; after 25 years experience, I was forced to put in some sunk drains to get about over my farm, as there were a number of sloughs and springy places that I could not crop except in the dry weather, and some of them not then, as they would mire a team; and wherever one of those places existed a large space on either side was lost for turning on and produced nothing but weeds. I had seen a good deal of under-draining whilst traveling in England and Ireland, but that style of thing was beyond my reach, as I could not command the means, and there was no "government drainage fund" provided in this country, so I went to work and hired ditchers cut two feet deep and as narrow in the bottom as a spade would work. I then cut long slim willows along the creek, laid them on the bottom as straight as possible, tramped them down as firmly as I could till they filled the ditch about a foot, then took the sod that formed the first spit taken out of the ditch (that had been placed on the opposite side from the dirt) and turned the grassy or sod side down and then filled in the dirt and left it rounding. Those drains have answered a good purpose for twenty-five years, how much longer they will last I can't tell, but I plow and haul over them, I put in more or less of those drains every year, and you should see the corn raised last year on spots that produced nothing but cattail flaggers and rushes heretofore!

Recently I substitute split oak, old rails or anything solid for the willows, cover with old boards and then some waste straw or hay before filling in the dirt; care should be taken to leave no large holes where minks, muskrats, etc., etc., could get in and work up the drain. For many reasons those drains are preferable to the tile as the roots of water plants frequently get into the joints of the tile and prevent the surplus water from getting in.

Now a few hints about digging drains in sloughs. Never follow the middle or lowest part of the slough but lay off your drain to cross it frequently so as to absorb the seepage water. The surface water should follow the slough (which you can't prevent) in heavy rains when there is much water, it will have to pass off in the old channel, but if your drain is in the middle it will wash out in spite of all your efforts to prevent it. Most of the sloughs are more or less crooked, and a straight ditch will cut into the rising ground on either side so as to prevent the washing out. The cost of these drains is trifling. The digging should not exceed 12½ cents per rod and the other expenses are very little. I generally count 20 cents per rod for all expenses. Now then \$5 will put in 25 rods of a drain that will pay for itself twice over the first crop. Just consider what a comfort it would be to cultivate that nice ten acre lot, etc., etc., by plowing across those nasty, wet, spouty sloughs, and raising your best corn, etc., on this very land that now mars the beauty of your field. Within sight of the window I am writing at, is one of those sloughs I have drained in this manner all last season I could plow a crop and tend it the same as any other part of the field, whilst above my fence on my neighbor's land, acres and acres are lost to all useful purposes for want of about \$10 worth of drainage; and not only lost but are nursing beds for foul odors that is both an injury to him and his neighbors.

Another point in favor of this kind of drainage is that the farmer can do it all himself without any outlay for tiling etc. It took years to get my neighbors into the notion of under-draining, but after trying a little they are now going into it. Now I don't want it to be understood that I am opposed to tile draining on scientific principles. I am well aware how greatly it improves the land and stimulates growth, but I only advance those few crude ideas to men who like myself have to commence with small means,

work their own way through life and make the most of the circumstances that surround them.

Were the legislature to offer, by way of a bonus, to reduce the taxes on all land that was underdrained in this manner 10 per cent. of the amount expended each year, it would be a great inducement for men to improve their farms. But it is hopeless to look for legislation in favor of agriculture till farmers have manhood and independence enough to send men of their own class to represent them.

Now before I conclude I want to call the attention of my fellow farmers to the importance of raising beets for their cattle for winter feed. For the last few years I have raised more or less mangolds and sugar beets. Last year I had about ¼ of an acre on which I raised about four tons of beets, which were fed to my cows during the winter. My wife could tell every time when the cows did not get their beets, not only from the quantity, but the quality of the milk; there is no food gives richer milk than beets. I have often wondered there has been no efforts made to establish beet sugar factories in this country. Beet sugar is no wild theory. One-third of the sugar in the world is manufactured from beets; I never saw any other kind in France and Germany. France not only raises their home supply but exports large amounts. It could be raised and manufactured here at a cost not to exceed 5 cents per pound. I believe the cost in France is about 4 cents. It is looked upon as the best and most profitable crop they can raise. All the offal is fed to cattle and the valuation of farming lands where the beet is raised and manufactured, is double that of the surrounding territory. Any of our western lands will raise beets equal to those of France. I found that beets were excellent food for hogs whilst fattening; I feed them with corn and the fattening hogs would leave the corn any time for the beets. Now if the legislature would offer a premium sufficient to stimulate some enterprising men to start beet sugar manufactories it would add very naturally to the productive wealth of the State. Here is where enterprise would pay and relieve other branches of agriculture. We are too apt to run on one track and over produce in one direction.

I would like to ascertain from readers of the FARMER if they ever knew of any cases of Pleuro-Pneumonia originating on our western plains. Now, I am anxious to learn about this point, as I am writing a series of articles for the *Irish Farmers' Gazette* and I take the ground that there is no Pleuro-Pneumonia to be found in America outside of the Atlantic states and then only when the dairy cows are fed with still slop. That the Texas fever is altogether a different disease. The one originates in a damp, moist atmosphere (for instance Holland) and is a lung disease, whilst the other is a disease peculiar to a dry climate. I would be thankful for any information on those points as I am doing all I can to attract the attention of English shippers of both cattle and grain to the importance of shipping by the Mississippi by way of New Orleans. This will counteract the monopolies enjoyed by the main trunk railroads, and the middlemen that gobble all the profits that come between the producer and consumer. One little statement made by a deputy from St. Louis at the convention held at New Orleans last December, for the purpose of memorializing Congress for the improvement of the Mississippi, ought to open the eyes of every Western man to the importance of this subject. Last fall the steamboat William took down to New Orleans (between herself and barges) 27,000 tons in one trip; this would require 90 locomotives and 2,700 freight cars, at a cost of \$178,000 for freight charges, whilst the cost by the steamboat was only \$18,000 or about 10 per cent. But my article is too long and must close with a hope that some of my fellow farmers will try this cheap drainage plan. If they once try it they will persevere. SAMUEL SINNETT.

Hedges.

EDITORS FARMER: After having perused all the articles published in your paper since making my inquiry relating to the advisability of growing hedge as a fence, I am compelled to conclude that either I was not understood or that such facts as are needed by all interested, are not to be had. Several parties have referred to my queries without giving the information sought, but in place thereof have given the old rehash of "How to Set Out a Hedge," that has been going the rounds of agricultural papers for thirty years, to my knowledge, and it seems to me that after that length of time, facts relating to the last care or utility of hedge, should be as attainable as any other cheap information not sold at \$5 a recipe. Few men

like to advertise their failures. Is not this the matter with "Old Hedge Fence?"

I admit that it grows fast and promises much, but fear it has something wrong in the fruitage, like the pumpkin vines in Reno county, which grew so fast they wore out the fruit dragging it over the ground.

John Thomas, of Osage, says after fourteen years it was condemned. Now will he say why? Did it fail to make a fence, or cost too much to care for? or, was it through neglect and general cussedness?

Mr. E. Tilton, of Louisburg, declines to answer the queries, but criticises them, and proceeds to say sage orange has no equal as a hedge plant. Well, granted it is the best; does it fill the bill? Will the same time and money invested, pay as well and give as much fence as if invested in other kinds. Does not its annual cost, to keep good and slightly, amount to more than to build and keep up other kinds of fence?

Osage may be the best hedge, and yet not be advisable to grow or keep. I have seen, as he says, a few patches of good fence. A millionaire, here, keeps one around his lawn, but no where else around his farm. He, Tilton, quotes W. M. Man, of Gilman, Illinois. Well, I lived and farmed in that county four years, and do not remember seeing but one-half mile of good fence, and that was tight and sixteen feet high, and was condemned severely by its owner, who had the best fenced farm in the township. Twenty years ago there was a hedge fever in and about that county. I have rode extensively, selling farm machinery there, and can say with truth that hedge is now a rarity there. "Why is it?"

Now, lastly, Mr. Warren, of Douglas county, seems to have had some experience. Will he please tell what it costs per rod, annually, to keep hedge trimmed into shape? Do the trimmings fill the ground so as to be a nuisance? Do not the roots exhaust the land of moisture, or fertility, so as to injure the crops near them? These are questions of business utility, of profit and loss. Let us have the facts. What is the cost of keeping in good order, for years, a hedge fence?

No gardening yet. Will plant potatoes and peas this week. E. A. PECK.

Kansas and Mechanics.

In answer to several recent communications to the FARMER from the east, would say, from personal observation, that a good carpenter and stone mason, especially the latter, can do well in Kansas in conjunction with farming. By their skill and industry they can add greatly to the comfort and value of their farms, and that at small expense. And if they are inclined to the use of the jack-plane and trowel, and prefer them to the plow and cattle whip, they will readily find men to exchange work with them. In my opinion a good stone mason and carpenter could to-day settle down right here with nothing but their tools, and in three years have good farms, well stocked, too. Of course I don't mean, nor do I want it inferred, that a whole eastern army can swoop down upon us and each one find it alike profitable. I am now speaking of the chance I know one community offers the two above named. I suppose, however, there are numerous places throughout Kansas which afford like opportunities, and in which sober, industrious and thorough tradesmen can in a like time save in value what they will probably never save in town or city, where, notwithstanding their zeal and energy, the days of non-employment (the rainy days so-called) come often and the demands on health and pocket are more incessant and exorbitant. When they fully have made up their minds that a farm is what they want, let them come and remember, as all farmers ought (who mean to honor their occupation), that man has made only the town. God made the country. But I trespass. JAS. B. JOHNSON.

Allen, Lyon Co., Kas.

Poisoning Gophers vs. Trapping.

Six years ago I commenced the nursery business here. I found that the ground was completely honey-combed by pocket gophers, and, knowing their fondness for tree roots and vegetables, I was very anxious to know the best method of destroying the little pests. I first concluded to trap them, and proceeded the same as directed by J. H. W. in the *KANSAS FARMER* of April 9th; when, after spending more or less time each day for two weeks, looking after my traps, and though I had caught about forty of the little fellows in that time, I could not see that I was gaining much on them. So I concluded to try what virtue there was in strychnine. I procured several small sweet potatoes

and cut them in slices one-half inch long, then with the point of a knife I inserted in each slice a crystal of the strychnine the size of a pin head. Then with these poisoned bits of sweet potatoes and spade in hand I went all over my land, and wherever I saw a fresh sign, I dug till I found its roadway, into which I thrust one of the poisoned pieces then covered up the hole again. I continued to repeat this operation at intervals of two weeks, or as often as I discovered fresh signs; and, to my great relief, I found that gophers soon got so scarce that their damage was hardly noticed, and for the last three years I have been bothered but very little with them. C. BISHER.

Hutchinson, Kas., April 15, 1879.

Literary Items.—No. 11.

GUNPOWDER AND CANNON.

Friar Bacon, who died in the year 1292, is generally supposed to be the first discoverer of gunpowder; he never applied it to any practical purpose, however, but looked on it as a mere matter of curiosity. About fifty years after the death of Friar Bacon, a German monk, of the name of Swartz, made a like discovery. It was then applied to the use of fire-arms. Six years after, the English army, at the celebrated battle of Cressy, first introduced cannon as an instrument of defense. They were not solid, but composed of strong bars of iron, bound together by iron hoops, and from them arrows were fired.

Pistols are of later invention, and derive their name from the place where they originally were manufactured—Pistoga, in Tuscany.

VANDYKE.

Here is a little scrap for the ladies, which is of some historical interest. There is a style of laced handkerchief which many of my fair readers know by the name of "Vandyke." This term originated from an old painting by Vandyke, a celebrated painter of Germany, who flourished at the time of the commonwealth of England, and had by his skill as a painter presented the peculiar characteristics of dress as worn by the followers of the unfortunate Charles. The paintings of Vandyke are still considered as among the best oil paintings, and they bring a high price, partly, no doubt, from their being the products of a former generation.

SPINNING-JENNY.

Hargrave, a carpenter by trade, invented the spinning-jenny, in the year 1767. Three years after, Richard Arkwright, a barber, made a decided improvement on the invention of Hargrave, by which manual labor is greatly lessened. As a token of his genius, the people of England erected a marble statue at Exeter.

COTTON-GIN.

Prior to the celebrated Whitney's cotton-gin, cotton sheeting sold at fifty to sixty cents per yard. This useful invention reduced the price of sheeting to seven and eight cents per yard. Next to the steam engine, no mechanical invention has saved human labor as much as Whitney's cotton-gin—an American invention.

COTTON FIRST EXPORTED.

The late Robert Owen, of Lanark, Scotland, and father of Robert Dale Owen, ex M. C. from Indiana, when on a visit to the United States, in the year 1845, said he remembered the time when the labor-saving machines of England equalled the labor of twelve millions of men, but now it equalled eight hundred millions of men. Mr. Owen remarked that he worked the two first bales of cotton ever imported into England. This was about the year 1792-3.

FABIAN SYSTEM OF WARFARE.

Fabius was a Roman general who flourished B. C. 200 years. He fought against Hannibal, the great Carthaginian general. In place of fighting in the open field, like his predecessors, he continually harassed the enemy by counter-marches and ambuscades, from which he received the name of "Delayer."

Washington, in the Revolutionary war, adopted this policy. This is known as the Fabian system.

ORREBY.

Those who have studied astronomy know what is called an orrery. It is an instructive instrument to explain the movement and revolutions of the heavenly bodies. It was constructed in the last century by a mathematician of the name of Rowley. The Earl of Orrery was his friend and patron, and from this originated the name of Orrery.

THE EARL OF ORREBY

wrote the life of the eccentric Dean Swift, Dean of St. Patrick. He retails a story of the Dean, which is somewhat amusing. One Sunday, after the morning service, the dean invited the son of a nobleman to take dinner with him. They sat conversing over their wine until the hour of the afternoon service had arrived; the

dean then offered to bet his young friend that he could outrun him in a race to the cathedral. The bet was accepted, and off they started at full speed. The dean had become somewhat corpulent, for a literary genius, in his old age, so he lagged behind. His young friend stopped a short distance from the door of the church, out of respect for the place; but the Dean rushed past him, in full speed, and ran through the church into the pulpit, much out of breath.

The congregation, which had been anxiously waiting some time for the dean, was astonished at the proceedings—it was a desecration of the place, etc.

By the time the first part of the service was over, the dean had recovered himself. He arose and gave out the text, "The race is not always to the swift, nor the battle to the strong." The text was most admirably adapted to the peculiar circumstances. Dean Swift delivered, on that occasion, it is said, one of the most impressive discourses ever delivered within the walls of the venerable cathedral of St. Patrick. Those who had felt indignant at the conduct of the dean, were now convinced that the dean intended nothing wrong in undertaking the foot-race, but that it was done by way of illustrating the truth of the text. JAS. HANWAY.

Lane, Kansas.

Sheep Information Wanted.

EDITORS FARMER: Will some one tell us, through your columns, whether or not Potawatamie and also Wabanssee counties, are well adapted for sheep raising, and what kinds are the best to keep? What is a fair or reasonable price per head after shearing time? Can a man engage in sheep raising in the counties named owning his grazing-ground? In short, I would like to know a good place in your state to go into the sheep raising business, and write for information on the subject.

Please let me hear from men of practical experience, and oblige, A SUBSCRIBER.

Cure for Paralysis in Hogs.

One tablespoonful of arsenic for a large hog, once a day. A less amount for smaller ones in proportion to size. I have cured many in this way, and lost none.

The Useful Dogs.

We do not understand why the sheep growers who are clamoring so loudly for a strict dog law, do not ask the Legislature to exempt the shepherd dog from taxation. This dog when properly trained is the friend and protector of the sheep, and worth as much as a boy would be to watch over them and bring them to the fold at night. A friend residing in this county, who has kept sheep for forty years, says he would not part with his shepherd dog for \$50. For the past thirteen years, during which time he has owned such a dog, he has never had a sheep killed by dogs, and considers his flock as safe from damage in this way as any other kind of stock he raises. Besides taking care of the sheep, the dog brings up the cows and horses from the pasture when told to do so, and makes himself generally useful about the place. He is worth almost as much as a hired man and he is considered invaluable on the farm. The breeding of such dogs surely ought to be encouraged by law, and farmers and breeders ought to insist that a discrimination be made between their canine friends and foes.—Indiana Farmer.

Camels in Arizona.

In 1854-'55 Congress appropriated \$30,000 for the importation of camels to this country, and the store-ship Supply, under command of Lieutenant D. D. Porter, was sent to the Mediterranean to obtain them in Africa and the Levant. Fine specimens, thirty-three in all, were selected; one died during the voyage to this country; the rest were landed in Texas. In recent years little has been heard of these animals. The *Arizona Miner* states that four camels, three old and one young, all quite tame, have been running at large near Mineral Park. One of these is so old that it is supposed to belong to the stock originally imported. The Hon. George P. Marsh wrote a small volume on the camel, showing its probable usefulness if introduced into this country, shortly after the animals were brought to Texas. Camels are now bred in that state, and the business is said to be profitable. They feed on cactus and sage-brush, and prefer such food to that which ordinary cattle require. A Texas camel-breeder says that any of them, if well broken for service, can travel 100 miles a day, and one in his herd has gone over 150 miles in twenty-four hours. They seem to be fully acclimated, and are represented as docile.

Farm Stock.

Hornless Cattle.

It is well known that quiet habits are of prime value in feeding animals. Like a happy disposition in the human race, it is conducive to the formation of flesh, and it is this characteristic, as much as the scientific breeding, that brought the Polled Angus to the front in the prize ring, and that is now calling such universal attention to this admirable breed of beef cattle. The steer's head, like a lion's tail, is the index of his mind. If armed he is ready and anxious for war, if unarmed he is contented to behave himself.

That horns are superfluous ornaments, there is no doubt. That they are equally dangerous to man and beast, there can be no question. That we could get along without them, and cows enjoy life just as well without this ornament, is proven in the breed of sheep, wherein some have horns, while other have none, and the favorites at this time (the modern improved breeds like the South Downs, Oxford Downs, Cotswolds, and others) have no horns. Then why should we insist upon putting horns on cattle? It is only necessary to educate the public taste in favor of the object you have in view, to force the breeder or dealer into that line of thinking. For this reason a few prominent breeders or dealers ought to advocate, even if they do not at first practice, this idea, in selecting or breeding cattle.

We notice in several of our exchanges the practice advanced that by simply burning the tips of the rudimentary horns on the calf, that its growth will be arrested. This is certainly a mistaken notion. The core, commonly called the bone of the horn, is of peculiar construction. If it was a bone, then, if exposed to the air, it would rapidly decay; any doctor will tell you that the bone stripped of its periosteum cannot live. The horn, or outside shell, is the periosteum of the core of the horn. Any breeder of cattle has seen this outside shell knocked off of cattle frequently, and not only no trouble in the way of decayed bone intervening, but, on the contrary, the core or bone actually enlarging until it looked much like the horn on the other side of the head.

The point here argued, is that burning or otherwise destroying the rudimentary horn, will not arrest its growth. We must go deeper, and that means look to the breeding qualities or prepotency of the sire and dam. Look to the breed as it is commonly called. The prepotency of animals is no where more distinctly pronounced than in this peculiar characteristic. A Polled Angus bull bred to a long horned Texas cow in a great majority of cases, we think, produces a polled or hornless calf, thus showing how easy it would be to breed off this excrescence of cattle civilization. Horns undoubtedly belong to a barbarous age, to the time when cows had to protect themselves, and acted at that time a useful part to the economy of nature, but their day has passed. We have changed all that. We now offer the cow that protection which she originally entrusted to her horns. In other words, horns are a superfluous ornament that we can well dispense with, and we hope that breeders of cattle will take this matter into serious consideration, and, now while the market is low and improvements are in order, they will so shape their lines of breeding, whether with out-croppers or in the line, that the cow of the future will come into the arena ornamented with a plain classic head.—*Wallace's Monthly.*

The Choice of Mare in Breeding.

This is a subject that will bear careful consideration, as good judgment must be exercised in picking out the mare from which to breed; as in a great measure the health of the foal depends altogether on that of the dam. Like produces like, and the best rule to follow is, blood from the sire, and beauty from the dam. Medium sized mares have a stronger constitution than very large ones, and on that account they are the best to breed from. "The greatest blessing in life is an intelligent wife or a mare that produces foals." So spoke the prophet Mahomet, and in this speech there is a deal of wisdom; for a mare that brings forth foals adds wealth to her owner; but she must not only be intelligent, but also be possessed of good temper, good health, and plenty of room. The mare should be so formed in frame as to be well able to carry her offspring, and capable of nourishing it afterwards. A mare with a level, straight hip, in which the tail is set on very high, should never be selected for breeding purposes; but on the contrary, a mare, whose haunch bones form an angle with the sacrum, is the one to pick from, because such a mare has room enough to allow the foal to pass out and into the world. These points are very important, for if the foal is injured in its birth, it will never recover its powers, and will always remain injured. The pelvis should be deep and wide, and there should be more than the average length from hip to shoulder, so as to give plenty of room for the foal. Beyond this roomy frame the mare only requires such a shape and make as is adapted for the purpose intended, to wit: producing colts of the form and style she is intended to produce. To all this she must have four solid legs, well shaped, large feet, and by no means flat soled. She should have a lean, bony head, small ears, broad face, well carried neck, high withers, and above all, long, sloping shoulders. There is nothing more horrid than a straight shoulder, for it makes speed impossible, and gives a motion that often produces stumbling.

She should have a wide chest, and be very deep in the location of the heart. She should be very strong in her quarters, well let down,

and sickle-shaped above the hocks. If her hocks are wide apart, so much the better, for it indicates power. It has already been shown, that a brood mare should be considerably longer in the back, than one would choose a working horse to be; and if she is particularly so, then put her to a short-backed and close coupled horse.

The brood mare should be as near perfect as the artificial state of the animal will allow; and in every case the mare should be examined carefully to discover what she has inherited from her ancestors. Barring accidents, all deviation from a state of health in the mare may be looked upon as transmitted to her; because, in a good constitution, no treatment, such as training, will produce disease; and the appearance of any disease under this process, will show clearly that it is acquired and handed down from her parents. Still there are diseases which should be excepted or rejected accordingly. Broken knees, dislocated hips, and all such caused by accident may be overlooked; but spavins, ring-bones, splints, and all bony enlargements, are defects transmitted, and will be sure to be perpetuated. Curly hocks are hereditary, and ought to be avoided. Bad feet should be avoided, unless when caused by bad shoeing; and in the latter case it can be looked over.

Mares with broken wind rarely breed, and of course are out of the question, as no one would risk the recurrence, even if such a mare could get in foal.

Blindness may or may not be hereditary; but in every case it should be looked on with suspicion. Cataract without inflammation runs in families without a shadow of doubt, and when a mare has both eyes suffering with this disease, without any derangement, it is best to let them pass. If blindness is brought on by cold, accident, or violent inflammation, the eye is more or less disorganized and although this is objectionable, still it is not as bad as regular cataract.

Under no circumstances breed from a stallion which has any affection of the respiratory organs, or from one that has any affection of the eyes, unless it be the result of accident, such as a blow or puncture would produce,—nor even then if one eye sympathized with the other; and on the other hand breed not from a mare that is affected in either way.

Before sending the mare to the horse, she should be got in a perfect condition, by plenty of good nutritious food, gentle exercise, and comfortable stabling. She should not be in a pampered state, caused by hot stables or heavy clothing, but instead her coat should be short and fine, and the skin should be in a glowing and blooming condition.—*Ex.*

Outward Marks of a Good Cow.

The following points of a good cow are given by Captain J. C. Morris in an essay read before the Pennsylvania Board of Agriculture:

The best cows are of medium size, as a rule, and small-boned. The head is small, and rather long, with thick, wide lips, which give the muzzle a flat appearance; eyes large and bright, with a placid expression; ear large and thin, with soft, silky hair, and with rich orange-colored dandruff on the inside; horns set on a high pate, inclining forward at the base, and light, tapering and clean—the annual rings not deep (though depth of the rings indicate the condition in which the animal has been kept during the year; when well kept they are indistinct and blended together); neck long, clean, and thin, but not slender—well cut up under the throat and thickening as it joins the shoulder, giving the shoulder a finished appearance; the brisket rather thin, well down and clean from the dewlap; shoulders should be thin at the top of the blade, broad at the points, which should be nicely rounded—the shoulders lower than the hips; forelegs clean and straight and equally placed under the shoulders; back inclining upward toward the hips; chine full, which gives a full appearance to the crops; ribs rather straight and flat, full over the heart, showing a strong constitution, for everything depends on that in a milk cow. Loins broad and hips wide and high, rumps up even with the hips, though I have seen very good cows with low rumps, but they have in every case been otherwise uncommonly well marked. Pelvis should be wide, giving plenty of room for the tail; twist wide, but well cut up, which in all good cows must be the case to give plenty of room for the udder. Thighs thin; the hind legs should be a little crooked, fine below the hock, with a good-sized long foot. Dr. Loring, of Massachusetts, says: "No cow can do the work of a dairy that has a small short foot." The tail should be long and tapering, but I can not find any required length necessary. The udder should be long and broad, well set up between the thighs, with good-sized teats set well apart. The belly should sag a little in front of the udder, and rise as it approaches the brisket, and should be large as compared with the size of the cow.

Now, after this general description of the handsome cow, we will go to the points which I am called upon to detail to you, and without which there can be little or no milk—for all good milkers have them. The hair must be soft, indicating a soft, elastic skin, which you will find by taking the skin in your hand, and if it be soft and pliable like a kid glove, you are safe for either milk or beef. If, on the contrary, the skin feels harsh and hard, with a crackling sensation as it passes out of your hand, let her or him alone; you neither can have a good cow nor an animal that can be fed for beef. You never saw soft hair grow upon such a skin. This is the first test.

Next pass your hand under the belly of the cow, and you will find the so-called "milk-veins." They are an infallible indication of the good

qualities of a cow; the larger the veins the better the indications. In a very good cow you will sometimes find the veins branching off and making four instead of two, but they always join again before reaching the udder. The larger the veins, and the more irregular or angular they are, the more sure you are that the cow is one of the first-class milkers. You will find two orifices in the belly of the cow where the veins enter, and they will be in size according to the size of the veins; they should be of the same size or she is a blemished cow.

We will now go back to the udder, which should be covered with a soft, downy coat of hair, and in the front of it the hair begins to turn its course back between the teats. Its width is to be examined, for the wider the belt the better and surer are the indications. This belt, or mirror, runs up to the pelvis, and must be examined, as the width without a break is the point in which Guenon forms his opinion as to the best cows, to which he gives the name of "The Flanders Cow." That, with the width on the thigh, is a sure indication of the best cow. I never saw it fail; the only trouble is, there are but few cows that have it in a perfect form.

Turning Cows to Grass.

Dairymen differ considerably in opinion about the proper time for turning to grass. Some think the cow should be kept entirely on hay or fodder until the grass is sufficient for her support. Their argument is, that, having had a taste of grass, she will not eat any more with a good appetite, but will so constantly long for the grass as to get quite insufficient nourishment for the few weeks that the grass is growing up to a good pasture; and that this poor appetite will be saved if the cow is kept steadily upon hay and grain until she can get all the grass she wants.

On the other hand, it is contended that if the cow is permitted to run in pasture early, when she can get but little, the change will be so gradual as not to cause scouring or interference with her digestion or appetite; that the small laxative ration found in the grass will give her a relish for the dry hay, when in the barn; that when turned at once on a full pasture she is likely to eat so greedily as to derange her digestion, relax the bowels so much as to endanger her health, and often to interfere materially with her yield of milk. This is the argument, in short, on both sides; and we think the latter is the safer course, if the pasture is dry enough to properly allow cows to go upon it early. We have often seen bad results from giving cows flush pasture at once, and think the gradual system will usually be better for the cow and insure a better yield of milk. We find a little hay, once a day, to be relished even on full pasture. Let the change be gradual even if there be plenty of grass. We think the cows should not be allowed to remain on a good pasture more than an hour at a time at first. Give them a run of an hour in the forenoon and the same time in the afternoon, and then return them to the stable with good hay and a small allowance of grain. This is a trying period to the system, and three quarts of oats or four to six quarts of middlings will keep the cow steady in her milk during the change.—*National Live-Stock Journal.*

One of the Drawbacks.

When urging upon a majority of farmers a more general incorporation of wool and mutton into their list of crops, one of the first replies is, "I would keep a few sheep if it was not for the dogs," backing this position up with recitals of their own experience, or that of some neighbor, with those details of death and mutilation already too familiar to the flock owners of the country. Why is this so? Why do the legislatures of every state promptly pass laws for the imprisonment and punishment of men for stealing or injuring the property of their neighbors, and yet so persistently refuse (or neglect, which amounts to the same thing) anything like adequate legal protection for that same property from the incursions of canine rogues? Why does the scent of the kennel so confuse the ideas of the average law-maker as seemingly to incapacitate him for discriminating between right and wrong? Why is it that he will readily vote for the confinement of bulls, rams, stallions, and even cows, hogs and sheep, but give dogs the free run through the sheep folds and pastures of the same territory? Most of the great stock-growing states have laws authorizing the payment of bounties for the capture and destruction of wolves, enacted in seeming ignorance of the fact that the damage by unrestrained dogs in such states is vastly greater than is that from the depredations of all other animals. If the flocks of the country are to have legal protection from but one of their enemies, it were better that the bounties were paid on dog heads than for scalps of wolves, or brushes of foxes.

The sentimentality that grants a license to the dog which is withheld from other and less destructive animals, results in a heavier tax than any law-maker should be willing to inflict upon his constituency. It is unfair, because of inequality of its distribution. The owner of sheep is forced to bear an unjust proportion of the losses to the productive wealth of the country. The habits and instinct of the sheep—its gregariousness and gentleness, as well as its timidity and passiveness under torture—mark it as the favorite victim of canine rapacity and cowardice, and throw upon the flock-owners a burden which, if to be borne at all, should be shared with the holders of all other property.

Insisting upon legislation for restraint of dogs is not, and should not be construed as a warfare

for the extermination of those often useful, and sometimes indispensable animals. Reasonable men readily admit that the dog has his place in the world's great economy, and because they are thus reasonable they insist that the same dog shall be kept in its place; and to this end demand a rigid enforcement of all laws now on the statute books, and will ceaselessly labor for an advanced public sentiment that will not only make such enforcement possible, but will surround the sheep-walks of the whole country with such legal protection as may be possible under a proper respect for the rights and property of all citizens.

The above from the *Farmer's Review*, on the destruction of sheep by dogs, takes the beaten path of complaining of the destruction of sheep by dogs, and asking for law to remedy the evil, but it has been demonstrated by actual experiment, that a mere tax-law will not remedy the evil, for the very obvious reason that those who keep the greatest number and most dangerous class of dogs, to sheep, cannot be compelled to pay tax, because they have nothing that the tax collector can distract upon to make the tax out of. What then is to be done under the circumstances? There is but one remedy possible, which is the heroic one of making it a felony to own or harbor a dog about the premises unless the owner pays a license and keeps a collar on the animal with tag attached, as evidence of having complied with the law. With the alternative of a month in jail or pay license for the luxury of propagating curs, the breeders of the race of sheep thieves would not hesitate as to the course to pursue, and the worthless race of curs would soon be exterminated, while the per cent of all the dog stock in the country would be very largely lessened.

Crossing Sheep.

Mr. Leonidas McDaniel, an extensive wool grower of Rush county, Indiana, gives through the *Indiana Farmer* his experience in crossing the different breeds. He says: Merino sheep will herd together in large flocks better than any other kind, if a man is only breeding for wool. They will not do for mutton and wool combined as a breed, but to cross them with Cotswolds makes next to the best cross I ever tried. But my most successful cross is one-fourth Southdown and three-fourths Longwool. For hardiness, size of carcass, and wool, all combined, this cross cannot be beat in this state—climate, market and wool all considered. To get this cross, I would start on the largest best Cotswolds ewes that I could raise or buy, and would stay with them all the time, but in about four years, or five at most, they will run down. To counteract this tendency to run down and take scours and rot, and all other ills that this open wool breed is liable to take, on account of our severe winters, I just throw in one-fourth Southdown. To make this cross, use a Southdown buck on those large ewes, then cross again with Leicester or Lincoln. I know some thoroughbred gentlemen will cry out, "Oh, this is a Mongrel breed." Well, I know that. I sheared 15½ pounds of wool from my yearlings, and sold a few that weighed 135 pounds. In a month after shearing time my ewes will weigh from 180 to 200 pounds and are always fat with half a chance. They live long and breed well. I have some that raised lambs at 12 years old, and I sold the lambs at \$10.

The Sheep Everywhere.

As showing the wide range of climates in which sheep are kept for the value of their wool for export, it will be seen from what we give below that almost every climate on the face of the globe has exported wool to the United States. The high and dry plains of South America export annually 100,000,000 pounds of wool to various countries on the globe. There the celebrated "Mestiza" is grown, from which the finest cloth is made. The interior of Australia produces vast quantities of wool of the finest grade. New Zealand produces an exceedingly fine grade of wool from which the finest delaines are made. High, dry lands, in a warm climate, produce the finest and best wools, for these soils produce sweet, fine grasses. Much of the hill land of the south already produces or may be made to produce, not only sweet but succulent grasses.

The finest merino wool, besides in the countries named above, is produced in Spain, France, Algeria, and Cape Colony on the La Plata, South America.

England, Scotland, Dominion of Canada, West Indies, British Africa, British East Indies, Australia, Cuba, France, Brazil, China, Argentine Republic, Dutch West Indies, Guiana, Mexico, Italy, Venezuela, Belgium, United States of Columbia, Uruguay, Russia on the Black Sea, Chili, Denmark, Danish West Indies, Austria and Turkey, are countries which have exported wool to the United States.

The great plains of the west correspond to the dry plains of some of the countries named above. Others, like Spain, France and Austria, have a climate not unlike the South.—*Prairie Farmer.*

Breeding In-and-In.

All our more prominent breeds of swine have undoubtedly been made from the result of some happy cross, bred in-and-in, and thence forward bred in line, that is, from particular families. Thus Mr. Fisher Hobbs, the breeder of the improved Essex, perhaps the best of the small breeds, selected three families to breed from, selecting judiciously therefrom and breeding in line; that is, from certain families.

While the scientific breeder may safely breed in-and-in, even with swine, knowing always when to stop; while he may safely breed to line,

and thus perpetuate certain desirable qualities, the ordinary breeder who intends raising the stock for fattening had altogether better breed from sire and dam not akin, and not only this, but from a boar of peculiar stamina. Thus the sows, if bred exceedingly fine, will be more apt to have healthy and prolific litters. Nevertheless so far as pigs for profit in fattening are concerned, it is not necessary that the animals be bred so fine as when the distinct characteristics of a given breed are to be retained.

The Herefords.

The *Cultivator*, in closing an article on this fine breed of cattle, says:

"When the Hon. M. H. Cochrane, of Compton, P. Q., a few years ago, disposed of his magnificent herd of Herefords to two Maine breeders, he did it, probably, because the Short-horns were coming to be a more fashionable breed; but now, all over the west, the Herefords are growing in favor, as it begins to be known that the grades of this breed are so valuable for beef, attaining large size on indifferent feed, and when they come to the block, showing meat that is well marbled and juicy, commanding a high price in market. In Maine it has been found that the fine grades, bred as the result of the thoroughbred animals introduced by H. C. Burleigh, of Fairfield, the Messrs. Shores, and W. P. Blake, Esq., of Waterville, the Messrs. Underwood, of Fayette, and Mr. J. S. Hawes, of Vassalboro, have brought the highest prices in the Lewiston, Augusta, Portland, and even Boston markets; and this must be the verdict wherever the merits of the breed become fully known. As grazers or feeders the Herefords give the largest returns for the care bestowed upon them and the food consumed; they mature early, bring a high price, and in the market or upon the show-ground are winning a sure and high and lasting place. In ten years they will surely be the most popular and highly esteemed of the larger breeds of cattle in this country."

Feeding Farm Stock.

For several years past either hired help or my own boys have taken the care of the horses and cattle while I reserved to myself the time, while they were doing the regular chores, to see that tools were in order, and everything put in readiness for the work of the day. I always found that such helps were inclined to overfeed—that is, would place so much before the animals at once, that much of the feed would be wasted. Cattle having twice as much given them at once as needed, after eating what they wanted, would leave what seemed to be just as good as what they had eaten; that they would not eat more until fresh feed was given them, which caused much to go to waste; and it was much the same with feeding the horses, only that by their having more than they wanted, so as to be left before them all the time, they would not seem to feed relish any, even the best of hay. As to feeding grain, it is very essential that the amount to be given any animal should be regulated by what is required of him, either work or fat or by his age, and also in the quantity of his other feed, either hay or straw, and the overfeeding of grain to any stock is worse for them than the overfeeding of fodder.

It has come about, partly by the economy of these times, that I have taken the whole charge of feeding my stock this winter, so I would do the feeding as I believed to be the best way, and it has worked as well or better than I expected, else I never would have said anything about it. For fodder I had two kinds of hay—good timothy, and that made from a good growth of spring wheat, cut just after heading out, because the insects were working badly in it; besides good corn-stalks and straw. With these I would give out four feedings through the day, used alternately. The first thing in the morning give a light feeding of the spring wheat hay, the next, after breakfast, and after seeing that the first is eaten up clean, would feed well with corn-stalks; at noon would give them a good quantity of straw to pick over, then at night would clear out all the leavings of straw and corn butts to use for their bedding, and give them as much timothy hay as they would eat up clean. This gives them a variety which they have always relished, and without wasting any hay or feeding any grain. I find them doing better than any previous winter when they were fed some grain and much hay, and did no more work than they do now. This good result in their winter keeping I credit to the variety of their feed, and giving it to them at regular times, and only as much as they would eat.

The cost and labor spent in providing for stock is abundantly compensated in the enlargement of the profit account when sold. This fact may be illustrated in cattle, for instance: Take a herd of cattle that has received proper attention in the way of feed and shelter, and compare them with another herd of the same number, age and grade, but which have not received such attention, and see what a marked difference there is. Those of the former herd are large, thrifty, plump and heavy, while those of the latter possess no such symmetrical proportions, and consequently will not, when placed in market, bring half so much even if disposed of at the same rates as the former herd. Those that receive the best care will be the most profitable. This should lead farmers to make more ample provisions for their stock. And at what little expense and labor might this be effected. It is safe to say that if farmers would provide one-sixteenth of the comfort for their dumb animals that they do for themselves the end would be much facilitated if not accomplished.—*Cor. Prairie Farmer.*

Poultry.

Gapes.

The season is now at hand when this disease of infant poultry will prove most troublesome and carry off thousands of chicks, unless a speedy remedy is at hand. We find the following surgical remedy in the *Poultry Bulletin*, which may save the lives of many innocents if the operation is performed by skillful hands:

The instrument used was a quill feather, not large, but stiffer than I had seen used before; it was stripped to within three quarters of an inch of its end, the tip of which was wet and twisted tightly so as to form a sharp point about a quarter of an inch long; the remainder of the barbs were drawn back, forming an arrow head or barbed point. Then come the part of the operation that always had been a mystery—how the feather could be properly inserted into the wind-pipe, for the chick struggles so violently when anything touches the inside of the trachea, that it is almost impossible to insert it without using force, to the injury of the subject. However, this was accomplished with ease, by using a low seat, holding the chick's feet tightly between the knees, opening the mouth with the right hand, drawing out the tongue and placing the left hand upon it, pressing it firmly to the lower mandible. The tongue should be so far drawn out that the entrance to the windpipe is brought clearly to view. At the first gape the feather must be inserted instantly, but to prevent violent struggling the unoccupied fingers of the left hand must be held tightly against the back of the patient's head. The head must be held up and the neck drawn out its full length so that the feather can be pushed down straight and easily to the bottom of the windpipe. Twist the feather rapidly, then draw it out slowly, twisting it as it is withdrawn. The worms will invariably be found adhering to the feather. After seeing this accomplished so successfully, I soon found some chicks at a neighbor's, feeling sure that I was fully initiated into the secret of a curative of this vexatious disease, and I did not fail in a single instance."

Hamburgs.

There are six varieties of Hamburgs: the Silver Spangled, Golden Spangled, Silver Penciled, Golden Penciled, Black and White. The two varieties of Penciled were originally imported from Holland, and many years ago were known as the Dutch Everlasting Layers. The Spangled and Black varieties are recognized as natives of England of unknown antiquity. The Spangled were formerly known as Lancashire Mooneys and also as Yorkshire Pheasants and the Black as the Black Pheasant fowl.

Mr. Beldon, the most successful breeder of Hamburgs in England, says:

"Hamburgs are without doubt the most beautiful breed of poultry we possess, as well as one of the most useful. The dwellers in the country will generally prefer the Silver, while citizens will take the Golden or Black. But all of them, in their matchless variety of marking and color, will delight the eye with the utmost degree which is perhaps possible of beauty in fowls."

"As a rule Hamburgs are a healthy breed, and for the farmer I think they are the fowl of fowls."

"On a good homestead they will almost keep themselves, and if well attended to, will pay as well as any other part of his stock."

"I have often had pullets laying at five months old, especially of the Penciled varieties; the Spangled do not generally lay quite so early."

"They are small eaters and wonderful egg-producers—a single hen laying in a twelve months, under favorable circumstances, from 200 to 220 eggs. They are also capital foragers."

Being one of the non-incubating breeds their eggs necessarily have to be hatched and reared by other hens. Although they are small, yet their meat makes up for it in juicy richness, and their eggs are very fine, with bright yellow yolks. Each feather of the hen is alternately marked with a black then a white stripe; the Golden Penciled, it is gold and black; the Spangled varieties, each feather terminates with a spangle of a bright greenish black. On a green lawn their beautiful and peculiarly marked plumage shows them off to a great advantage.—*American Farmer*.

Hens or Pullets?

For breeders, there is little question that two-year-old hens are preferable to yearling pullets—where only "fancy" fowls are cultivated. The eggs of hens are larger. They are better developed. The chicks coming from hens' eggs are always strongest, the most mature at birth, and will grow up, generally speaking, more surely in the aggregate.

But hens two or three years old will not lay so great a number of eggs as will pullets in the first twelvemonth after they commence to lay. In quantity, therefore, yearling hens will excel; but not in quality, for hatching purposes.

For setting, then, we recommend eggs of year-old-past and two-year-old hens as the most serviceable and the most reliable, where these can be had handily. If the novice is commencing fowl-raising with a trio of young stock, however, it is perhaps as well to set the pullets' eggs in his case. The earliest litters a pullet lays in that case should not be used. They are not so good for incubation as are the latter ones.—*Poultry World*.

EFFECTIVE SCARECROW.—Take two small cheap mirrors, fasten them back to back, attach a cord to one angle, and hang them on a pole.

When the glass swings, the sun's rays are reflected all over the field, although it be a large one, and even the oldest and bravest crow will depart precipitately should one of these lightning flashes fall on him. The second plan, although a terror to the crow, is especially well suited to fields exposed to the inroads of small birds and even chickens. It involves the artificial hawk made of a large potatoe and long goose and turkey feathers. The maker can stick the feathers into the potato so that they will resemble the spread wings and tail of a hawk. It is astonishing what a ferocious bird of prey can be constructed from the above material. It only remains to hang the object by the tail from a bent pole, and the wind will do the rest.

Cure for Mange in Pigs.

One-part pine-tar, two-parts lard, mix and warm up to blood heat, apply thoroughly and feed a little sulphur, and keep them clean.

Patrons of Husbandry.

NATIONAL GRANGE.—Master: Samuel E. Adams, of Minnesota; Secretary: Wm. C. Ireland, Washington, D. C.; Treasurer: E. M. McDowell, Wayne, N. Y. **EXECUTIVE COMMITTEE.**—Hendley James, of Indiana; D. W. Aiken, of South Carolina; S. H. Ellis, of Ohio. **KANSAS STATE GRANGE.**—Master: Wm. Sims, Topeka, Shawnee county; Secretary: P. B. Maxson, Emporia, Lyon county; Treasurer: W. P. Popenoe, Topeka; Lecturer: J. H. Martin, Mound Creek, Miami county.

EXECUTIVE COMMITTEE.—W. H. Jones, Holton, Jackson county; Levi Dumbauld, Hartford, Lyon county; J. S. Payne, Cadmus, Linn county. **COUNTY DEPUTIES.**—J. T. Stevens, Lawrence, Douglas county; T. B. Tyers, Beatty, Marshall county; E. R. Powell, Augusta, Butler county; C. F. Morse, Milo, Lincoln county; A. J. Pope, Wichita, Sedgewick county; A. P. Beardon, Jefferson Co. Post Office, Dimond, Leavenworth county; S. W. Day, Ottawa, Franklin county; G. A. Hovey, Belleville, Republic county; J. E. Barrett, Greenleaf, Washington county; W. W. Cone, Topeka, Shawnee county; J. McComas, Holton, Jackson county; Charles Diabrow, Clay Centre, Clay county; Frank B. Smith, Rush Centre, Rush county; G. M. Summerville, McPherson, McPherson county; J. S. Payn, Cadmus, Linn county; Charles Wyeth, Minneapolis, Ottawa county; F. M. Wiernan, Millard, Morris county; John Andrews, Huron, Atchison county; George F. Jackson, Fredonia, Wilson county; D. C. Spurgeon, Leroy, Coffey county; James W. Williams, Peabody, Marion county; R. T. Ewalt, Great Bend, Barton county; C. S. Worley, Eureka, Greenwood county; James McCormick, Burr Oak, Jewell county; L. M. Barnett, Garnett, Anderson county; D. P. Clark, Kirwin, Phillips county; George Fell, Larned, Pawnee county; A. Huff, Salt City, Sumner county; James Faulkner, Iola, Allen county; W. J. Ellis, Miami county; George Amy, Glendale, Bourbon county; W. D. Covington, Smith county; P. O. Kirwin, J. H. Chandler, Rose, Woodson county; E. F. Williams, Erie, Neosho county; J. O. Vanardal, Winfield, Cowley county; George W. Black, Olathe, Johnson county; W. J. Campbell, Red Stone, Cloud county; John Rehgrig, Fairfax, Osage county; S. Fleck, Burr Hill, Russell county; J. K. Miller, Sterling, Rice county; W. D. Rippling, Severance, Doniphan county; Arthur Sharp, Girard, Crawford county; P. B. Maxson, Emporia, Lyon county; J. H. Hutchins, Hutchinson, Reno county; S. N. Wood, Cottonwood Falls, Chase county; G. S. Kneeland, Keene, Wabasha county.

TO OFFICERS OF SUBORDINATE GRANGES. For the use of Subordinate Granges we have a set of receipt and order books which will prevent accounts getting mixed up or confused. They are: 1st, Receipts for Dues. 2nd, Secretary's Receipts and 3rd, Orders on Treasurer. The set will be sent to any address, postage paid for \$1.00.

We solicit from Patrons, communications regarding the Order. Notices of New Elections, Feasts, Installations and a description of all subjects of general or special interest to Patrons.

Reorganize the Grange.

WORTHY PATRONS.—By the action of the National and State Grange the back dues of delinquent members of subordinate Granges have been remitted, thereby enabling all such members—suspended or otherwise—to report to their Granges, and be restored to good standing, upon the payment of such dues as their respective Granges may prescribe; the rule being for the quarter in which they ask their Grange to re-instate them.

It has also been provided (and I desire to again call the attention of the membership and county Deputies to the fact) that all back dues of dormant Granges have also been remitted, and that dues from such Granges to the State Grange will be required from the date of reorganization only.

In answer to inquiries as to what is necessary and how to proceed to revive and reorganize a dormant Grange, I would say, the old officers, or in case they refuse to act, or in their absence any two or more members, may fix upon a time and place of meeting, for the purpose of reviving and reorganizing their Grange and notify all members of the time, place and object of such meeting, and request their presence, and in case you have a county Deputy, invite him to meet with you. Having assembled call your meeting to order. State its objects, and then have some members to give a short lecture upon the objects, aims, principles and purposes of our Order, as set forth in our Declaration of Purposes, and after a general exchange of opinions, as to the necessity for such an organization in your locality, (an organization having for its object the mental, moral and social improvement of those directly interested in agriculture—the old and the young, the men and the women, the boys and the girls—together with the better protection and advancement of their material interests,) in case you find thirteen (nine men and four women,) or more, who are willing to revive and continue your organization, proceed at once, to elect and install your officers and continue the work of your Grange. Make out a new roll of the members who signify their willingness to continue the organization, and report the fact of your organization to the Secretary of State Grange, and make up your report for the quarter in which you reorganize and report and pay on the number who go into the new organization, and, after notice, drop the balance from the roll for non-payment of dues.

Much of the poverty and destitution, and consequent lack of that general information necessary to enable farmers to successfully prosecute their business as producers, and to intelligently discharge the duties devolving upon them as citizens, has resulted from the isolated condition in which we live. And our Grange organization surely furnishes the facilities for that social intercourse necessary to improve the mental, moral and social standing, and to secure that unity of action, useful information

and genuine sympathy necessary to general prosperity and consequent happiness of those engaged in tilling the soil.

Our Grange meetings enable us to extend acquaintances, cultivate the social amenities of civilized life, and furnish ample opportunities for that exchange of opinion and discussion of questions in which we have a common interest, necessary to communicate to others the information each has acquired, thus making the social feature of our Order a help and promoter of our material interests. But, in the language of Bro. Grosh, "we aim at far more and better than this. Meeting frequently as Brothers and Sisters of the same order, holding the same principles, striving for the same objects and recognizing the teachings of the same mysteries, a social feeling is cultivated, which no other meeting would be likely to awaken."

The only questions necessary to be considered in our efforts to organize a new or reorganize a dormant Grange are, first: Is there any necessity for an organization among farmers, having for its object the mental, moral and social improvement of those directly interested in agriculture; and as a means necessary to the accomplishment of these objects, the better protection and advancement of our material interests? Second: Is the order of Patrons of Husbandry as well or better suited to the necessary work of improving the standing, by adding to the general intelligence of those engaged in agricultural pursuits, than any other organization known among us?

Having answered these questions in the affirmative, as all fair minded persons will, I can see no good and sufficient reason for any farmer to withhold his support.

Wm. Sims.
TOPEKA, April 5, 1879.

Grange Clippings.

The isolation of the farmer has been his greatest drawback. Gradually this obstacle to a true and general progress has been removed in the general and improving character of our common schools, in the more enlarged circulation of the farm journal and books of agricultural science, in the endowment of agricultural colleges and experimental stations, in the making of branches of science allied to agriculture, specific objects of study, and in a clearer recognition on all sides of the relation of the various industrial pursuits to each other. Thus, step by step, the existing conditions have developed, and out of them a harmony and unity in the class most directly concerned. Under proper encouragement this is the law of nature: first the blade, then the ear, and lastly the corn in the ear. Out of this growth has come the Order of the Grange, which of itself is a continuous growth. What its future shall be and what blessings it shall dispense, rests in the hands of its friends.

We look for a glorious revival in the Grange in the year 1879. Let us get rid of the notion that it requires a large number to make the movement. One good Patron—whose heart is in the work—has the power to resuscitate a dead Grange. But he must work—work. Every accession to his side will divide the work. Many accessions will not only make the work easy but full of pleasure, and now is the time for action.

The following list of questions are presented as furnishing matter for discussion for evening meetings of a Grange:

Can seed which uniformly yields about forty bushels to the acre, be made to yield eighty bushels per acre, without careful selection of seed for a series of years?

Describe a perfect or ideal ear, that the farmer should always seek to grow in fact.

In selecting seed corn, what is the customary mode in this section?

Would selection of seed corn in the fall from the standing corn tend to produce earliness and size?

What advantages would result, to set apart a piece of ground to be especially cultivated for seed, over the practice of picking from the crib or from the field?

Why do farmers, as a rule, take only the middle grains of the ear for seed?

Has any member of this Grange tested the truth of the assertion that the grains from the butt end of the ears induce earliness of maturity, and those of the tip, length of cob; and in the absence of test, is it probable?—*Grange Bulletin*.

The lack of intelligent and harmonious cooperation among the agricultural classes, has given occasion, not unnaturally, on the part of the organized capital, to take advantage of the situation, and the result is an unfair distribution of the rewards of labor. To correct this is one object of the order, and in doing this we should be careful not to allow an over-zealous desire for reform lead us into the extremes we wish to correct in others. We cannot brag about any great reform or perfect our organization in a single day. Many evils will undoubtedly creep in, especially if we take hasty and inconsiderate action. It will only be after years of experience and patient toil that we can look for anything like perfection in our working system.

In the older states there is every indication that the granges are making steady progress and obtaining a sure foothold. A circular just issued by the West Virginia State Grange uses this encouraging language: "The condition of the order throughout the state is indeed encouraging. Reports from different parts of the state, received at the secretary's office, represent a 'revival,' not only of interest in the order, but many dormant Granges, under advice, instruction and encouragement from the State Master, have reorganized, and are now in better working shape than ever before."

Advertisements.

Our readers, in replying to advertisements in the Farmer, will do us a favor if they will state in their letters to advertisers that they saw the advertisement in the Kansas Farmer.

DARK BRAHMA FOWLS FOR SALE. Pure blood; imported. J. E. DUNCAN, corner Seventh and Fillmore Streets, Topeka, Kansas.

\$10 REWARD. Strayed away, a black and roan pointer bitch, small notch out of each ear, whoever will return her to Copeland's Restaurant will receive the above reward. A. C. WADDELL, Topeka, Kansas.

BROOM CORN SEED. Ohio Evergreen, and other choice varieties; send for circular.

A. D. FERRY & CO., 216 Kinzie St., Chicago, Ill.

Shannon Hill Stock Farm

Thoroughbred Short-Horn Cattle and Berkshire Pigs, bred and for sale. Only first-class animals allowed to leave the farm. Address G. W. GLICK, Atchison, Kansas.

CORN PLANTERS.

CLIMAX TWO-HORSE PLANTER, six chambers, rotary drop. BOSS TWO-HORSE PLANTER, adjustable slide-drop. Both these planters operate perfectly with any of the standard check rows. SUCKER DRILL, CAPITAL HAND PLANTER. All first-class machines and cheap. Address SPRINGFIELD (ILL.) MANFG CO.

WATER! WATER! FARMERS ATTENTION

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HUDSON & EWING, Editors & Proprietors,
Topeka, Kansas.

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TO SUBSCRIBERS.

A notification will be sent you one week in advance of the time your subscription expires, stating the fact, and requesting you to continue the same by forwarding your renewal subscription. No subscription is continued longer than it is paid for. This rule is general and applied to all our subscribers. The cash in advance principle is the only business basis upon which a paper can sustain itself. Our readers will please to understand when their paper is discontinued that it is in obedience to a general business rule, which is strictly adhered to and in no wise personal. A journal to be outspoken and useful to its readers, must be pecuniarily independent, and the above rules are such as experience among the best publishers have been found essential to permanent success.

Liming Eggs.

Recipes for preserving eggs are frequently published; but none of the many we have ever met with gives the necessary information, that would enable a novice to succeed. Liming eggs is an important business and is made a specialty of by numbers who handle large quantities of eggs in warm weather. By those who conduct the business on an extensive scale, large tanks, each of the capacity to contain a thousand or fifteen hundred dozen eggs, are provided in a cool cellar, where the eggs are put into the liquid or "pickle" as it is generally termed. Eggs preserved by the liming process supply an extensive demand in the cool season, especially in the months of November and December, and sell for remunerative prices.

The preservation of eggs by the process which we will describe, might be practiced by farmers to a much greater advantage than by egg men who make a specialty of it. During the hot months when eggs are, in many parts of the country almost unmarketable, on account of their tendency to rapid decay, they could be taken fresh from the nest and placed in the pickle in a cool cellar, where but few if any would spoil. Eggs for liming by those who follow the business on an extensive scale, require to be carefully "candled," which is a very nice process, requiring a good deal of practice to tell in hot weather when they are perfectly sound. Any one can tell when an egg is thoroughly rotten, as it will be opaque, or if the yolk has settled on one side by remaining in one position too long a time; but an egg may have a rosy tint and seem "all right" to an unpracticed eye when the incipient stages of decay have set in. A fresh egg is almost transparent with a rose tint when the light is reflected through it.

It will be generally found unnecessary to "candle" eggs till after the month of March, when the weather begins to grow warm, and eggs accumulate and are liable to become more or less stale. There are numerous devices for candling, but the simplest is the speediest and best, after one has learned to know a good egg under all conditions. A room entirely dark must be secured, and the operator provides himself with an ordinary tallow or paraffine candle. Placing the lighted candle on a box or stand in front of him, he seats himself, or stands on his feet as suits his convenience, having the basket of eggs to be "candled" by his side. Two eggs are taken in each hand—some take three in each hand—hold two of the egg together and close to the lighted candle, turning the eggs nearly entirely round by a rolling movement, so as to test them through every part of the shell. Two eggs being placed against each other and moved before the light by a rotary motion, the rays are reflected and refracted through the shells from each other much better than if only a single egg is held to the light. The first two having been inspected, by a dexterous movement in the hands the other two are brought forward and examined in the same way. The eggs must, at the same time be "checked," in order to ascertain whether the shell is sound also, the least crack in the shell being fatal to the egg after placing in the pickle. The "checking" is done by touching (striking) the shells quickly but lightly together. If both are sound they will give a sharp, clear ringing click, while a dead flat sound betrays the presence of a crack in the shell of one of the eggs, which is the cracked shell is ascertained by trying another egg on one or both of the first tested. A quantity of eggs having been examined and all imperfect ones culled out, the sound ones are placed in the pickle, which is made in the following manner:

For pickle for 500 dozen eggs take one half bushel of best white, fresh lime, such as is fit for making good whitewash: Proceed to slack the lime as for whitewashing, in a clean barrel or other vessel. After thorough slacking add to this quantity of lime about one hundred gallons of pure cool water. Let stand twenty four hours or until thoroughly cool, stirring well several times in the meantime. When well settled dip off the clear fluid carefully, so as not to disturb the lime on the bottom, and pour into the egg tank, filling the tank about half full. To one hundred gallons of lime water add 2 pound cream tartar and ten pounds of common salt, stir well and it is ready to receive the eggs, which may be put in with the hands or by filling a small basket sinking it in the pickle and carefully emptying the eggs from the basket.

This quantity of pickle can be increased or reduced to suit the size or number of casks and eggs to be used. A lard tierce makes one of the best pickling barrels, and will hold 165 or 170 dozen eggs. Clean the tierce by scraping out the lard and scalding with boiling water before putting in the lime water. Or coal oil barrels make good egg tanks by burning till the inside is slightly charred, then turn the barrel bottom up to smother out the fire; scrape off the char, and fill the barrel with lime water, soak for several days, empty and fill with the liquid to receive the eggs. Place your egg barrels in a cool dark cellar where they are to remain. Before filling the barrels, a wooden faucet should be placed in each barrel about five inches from the bottom, from which to draw off the pickle when it needs changing. Or this may be dispensed with if you have 4 or 5 feet of half inch rubber tubing to use as a siphon.

When it becomes necessary from causes hereafter mentioned, to change the pickle, care must be had not to draw more than two thirds of it off, or the weight of eggs are liable to break through in the bottom of the tank. If a siphon is used, tie a smooth stick to the rubber tubing, allowing it to project about ten inches from the end of the tube. Push the stick down carefully among the eggs till it rests on the bottom of the tank and start the siphon. When the pickle changes color or smells badly, and the thin crust which forms on top disappears, about two thirds of the pickle should be drawn off the eggs and placed in the slacking tub, into which throw a lump or two of fresh lime and let stand till cool when it may be returned to the egg tank. Or what is better, if you have fresh lime make new pickle. An egg or two is liable to be broken which helps to sour the pickle. It is advisable, after the eggs have been in pickle three or four week to change the pickle on them.

Fill the tanks to about four inches from the top with eggs and fill it up with pickle. Throw a couple of laths or strips across the tops of the barrels and cover with gunny sacks or matting, but not tight with boards. Keep the barrels filled up.

Egg houses which preserve eggs by this process (as) about 10 per cent, but the loss at the farm house where the eggs are gathered every day and placed in the pickle immediately should be almost nominal. Nicely pickled eggs cannot be told from fresh eggs by the appearance, except by an expert, and are as good for all purposes for cooking as fresh eggs, except for boiling. A soft boiled egg is the most delicate of all the many ways of cooking eggs, and the lime pickle imparts to it a slightly sour taste. A limed egg will always burst when boiling unless the but end of the shell is punctured with a needle, which gives vent to the gas generated by the heat.

Eggs properly pickled in the hot months, when they spoil in a few days, and sell at a very low price, find ready sale at hotels and restaurants in November and December, and often later, at remunerative prices. Eggs when taken out of the pickle should be washed clean by placing a few dozen at a time, as they are lifted from the pickling vat, into a tub of fresh water and stirring carefully with the hand. Place the eggs after washing in a cool airy place to dry, and candle out all spoiled eggs before sending to market.

On keeping eggs we clip the following from a back number of the *Prairie Farmer*: About a year ago the *Prairie Farmer* contained a recipe for keeping eggs a long time. It was simply to pack them in a cool place, small end down, in kegs or boxes filled with finely powdered dried earth, or common road dust, or sifted coal ashes. These settled between the eggs, kept them from access to the air, and prevented evaporation of the white or spoiling the yolk. The experiment was tried last June, before the intensely hot weather that succeeded. On taking the egg out of the packing they were as fresh and clean-looking as if fresh laid. On testing them for the table, they could not be told from fresh ones. When these were put down eggs sold for six cents per dozen. They were worth 18 cents, or an advance of 200 per cent, when taken out.

The shell of an egg is a very porous carbonate of lime. Left exposed to the air, it passes through the shell and soon spoils the contents.

The large emigration of colored people from the southern state to Kansas is attracting general attention throughout the country. They come of all ages and sex, and almost entirely destitute, and have to be cared for mainly by the white people among whom they land. There are at present landed in the towns on the Missouri border, principally at Wyandotte, somewhere between one and two thousand who have to have provision made for them immediately to prevent them from starvation.

A large meeting of the citizens of Topeka was held in the Opera House on Sunday night last to raise money to supply their immediate wants and discuss the situation generally. After getting the question stripped of sentiment and clap-trap, which comprise the effluence of all popular subjects, the conclusion of all present was that provision for the immediate wants of the colored immigrants must be made, and upwards of \$500, was subscribed and paid at the meeting.

Opinions are divided as to the future movements of the colored population of the south, some predicting that the present influx is but the advanced guard, and that the hundreds who have come will be followed by thousands, eager to get away from the land of persecution, where, one and all of them declare, it is death to stay, from starvation or abuse, or both, while others who claim, to have studied the question on the ground and are more familiar with it, predict that the present exodus will have a healthy influence on the planters, who seeing ruin to themselves if their labor deserts them, will bestir themselves to have justice and better treatment accord the negroes in future, and the tide of laborers ebbing away from them will be staid; that the colored people prefer to remain in the south to coming north, if they can live there in peace and security.

With the negroes fleeing from death and persecution to a land which, to the most of them, is a terra incognita, and the Confederate Brigadiers are raising a row at the Capital of the nation in their efforts to grasp the country by the throat a second time, the spectacle becomes a grim sarcasm on that high toned philanthropy and rhetorical justice, law, liberty, reconciliation and what not, which the ears of the people have been regaled with for the past few years, until they have been persuaded to place the destinies of the nation again in hands scarcely free from the stains of its own blood. In connection with this ugly question, one thing must not be lost sight of, which is, that these men who are struggling to grasp the last slender cord of control of the nation, are in the United States Congress by virtue of the representation which these fleeing negroes gave them.

The whole question in a nut shell, is, these fire eating Brigadiers must be put out of congress, and the government must see that the laboring people of the nation, north and south are insured peace and justice. This is the whole end and object of government, and this end must be attained by the shortest and most direct road. The same element now creating so much trouble and confusion had to be driven out by fire and sword for peace and humanity's sake within the recollection of this generation, and it must give way or be forced back by the demands of public necessity again.

Plant the best Potatoes.

Whatever variety of potatoes are planted, select the best tubers for seed. Plant large, well formed, smooth potatoes, as it is evidence of a large well formed variety, evidence of soundness and health, evidence of perfection; and in order to produce the best of anything the surest way is to select the best to grow from. Small potatoes used for seed may, and do often, produce large, fine tubers, but they may be a small variety—some of them, at least, are liable to be. If they do not belong to a small tuber family, then the weight of evidence is in favor of them being imperfect and unripe, consequently weak and unhealthy. Such stock, either of animals or vegetables is not fit to propagate from. Nature stores in the perfect seed what is required to promote and perpetuate the vigorous and hardy plant. By carefully selecting the best of everything to plant, the finest grain, fruit, roots and other vegetables can be produced with reasonable certainty; but if this fundamental law is neglected, the chances are in favor of a large percent of inferior produce. The same natural law governs in the vegetable, that is acknowledged to be so potent in the animal kingdom. Like produces like, and faults and imperfections seem to be more readily transmitted than the more desirable qualities. Very much better crops could be raised if farmers gave this subject more study and acted upon the well established principles of production.

Many years ago, and in a period of our agricultural history when new varieties of any farm extremely rare, an observant farmer of Pennsylvania, acting on the principle that perfect grain could alone be insured by using perfect seed, originated a superior variety of wheat which he named "barrel wheat." This he did by holding the sheaves of wheat in his hands by the burts and beating the tops over a barrel. The large, plump, perfect grains would fly out and none others. This wheat was used as seed, and the same practice to procure seed, being followed a few years produced, what seemed to be a new variety of wheat, but which was only the result of a practical application of the natural law of selecting the fittest. This anecdote is a practical illustration of using none but the very best for seed. Unripe, small potatoes are unfit for seed, neither are overgrown, hollow hearted tubers. The former are weak and unhealthy, the latter, like all abnormal monsters, unhealthy.

The Farmer as a Law-Giver.

As soon as the changes in political independence begin to be felt, which are slowly but steadily advancing, and which will detach farmers, or rather free them, from the blind party servility which binds such multitudes hand and foot, they will begin to assume the leadership in state affairs, in place of what they have been and largely are at present, blind followers. Their interest in good government, peace, and low taxes, is vastly greater than any other class. Their investment in the soil is fixed; they can neither hide it nor spirit it out of reach of the assessor. They have less to tempt them to promote bad government than any other class. They are nearer to nature and less artificial than any other class. Practice and independent thought will make of farmers the wisest statesmen and safest politicians.

In urging the necessity of more political independence for farmers, it must not be inferred that we advocate a "farmers' party" distinct, isolated and antagonistic to other and existing political parties, but that through more culture and sympathy of mutual interests, they may see at least the necessity of self poise, and the policy of holding in check the race of political adventurers who have run the government of the country, state and national, solely with a view of making it a business which administrators to their personal wants. No candid man who examines our institutions as organized and managed, can reach any other conclusion than that they are controlled and directed in the main, by professionals in the business, who are really political adventurers, whose sole dependence for the enjoyment, luxuries and necessities of life—what the world calls a living—is based on managing the government in state and nation.

This fact being conceded, the sequence is easy and natural, that the crowning motive of every man is to make his chosen business pay the largest income possible. This is clearly the solution of the question why every part, parcel and detail of the government from the greatest to the most trifling, costs so enormously, gauged by private business requiring like expenditure of time and ability to accomplish.

Let every man who has eyes look among the towns and villages of his neighborhood, and he will see men who go, or have gone into politics as a business. They have some small establishment where they follow a nominal business, but their main dependence in life is party politics, and what they can make out of it in solid cash. Some of them go up to the hulls of legislation as senators and representatives of the people, while others stay at home to "manage." They legislate to multiply offices, officers, and an endless system of fees, of red tape and circumlocution. Our courts, it is patent to every man, are enormous shams for justice, are nicely adjusted systems of delays, with expenses and fees multiplying at every delay. This immense drain of expense comes mainly from the soil.

When will farmers learn, in order to save their hard earned money, that it is as important, aye, more important, to lay hold of and master the political problems of the country, than it is to raise crops. They must, in place of choosing law-makers composed of penniless adventurers, picked up in the towns and villages, who have literally nothing at stake, send up their own men. Let them go as republicans, as democrats, as greenbackers, or what not, but above all and beyond all, let them be sent as farmers, with well understood measures of reform in the interest of more simple, economical government, which shall first receive their united attention; and the squabble over minor party measures shall be last in place of the first, second, third and fourth acts of the play as at present.

Farmers may easily accomplish all of these reforms if they will heartily co-operate, and learn to believe in themselves. It will put thousands of dollars into their pockets annually, command respect for the agricultural class from the public, and inspire confidence in themselves, both of which they have ever been strangers to.

Editors' Arbor-Day.

A. H. & A. C. Greese of Kansas Home Nursery, at Lawrence, Kansas, donated a lot of shade and forest trees to the press of Topeka to be planted in the Capitol Square, which ceremony was performed on Saturday last. The procession formed by the editorial corps and the employees of the printing offices of the city, marched to the grounds to the music of fife and drum, each having a tree, which was placed in a hole previously prepared. An emblematic square and circle of trees were set, which are designed to typify through the revolving years, the solid phalanx of power and the never ending influence of the press.

Pleura-Pneumonia.

Mr. Samuel Sinnett in his article published in the present issue of the *FARMER*, asks his brother farmers to report if they know of any cases of pleura-pneumonia originating or occurring anywhere in the west. It is very important, as Mr. Sinnett suggests, that the minds of English importers of live stock and the British public, should be disabused of the apprehension that the western states are in any way affected by this disease.

On the subject of drainage, discussed in the same article, fortunately for Kansas, there is scarcely any spot in the state that is not self-drained.

The Weather and the Crops.

Some gloomy forebodings were beginning to be indulged in by the people of Kansas, before the recent copious rains came. The season from November had passed without rain-fall greatly relieved, however, by one or two falls of snow, and March, when rain is looked for everywhere, had come and gone: cold dry winds were fast destroying the prospects for a wheat crop, and when hope was well nigh gone the joyous rain came in a succession of thunder showers. As if by magic vegetation revived, the brown wheat fields, put on green robes to welcome the genial sunshine of April, and gladness once more filled the land, and now the whole people "rejoiceth as a strong man to run a race."

Early sown wheat has generally withstood the severe ordeal, of the cold March winds, but the late sown and weak wheat will add but little to the future crop. Corn planting is now being pushed briskly, and a good breadth of oats, and in some sections, spring wheat, has been sown, which will make good progress in this favorable weather.

Peaches in some neighborhoods are reported killed, while in others, enough buds have escaped to make a fine crop. Apples are reported uninjured. But as yet there is uncertainty about the fruit and berry crops.

Stock of all kinds has come through the winter in good condition, as it should always do in this dry, healthy climate, where there is no excuse for a short supply of food, and when temporary shelter can be made that will answer to shelter all animals from cold and storms.

Pure Water for the Cows.

Many farms have ponds and sloughs in their pasture which are used as watering places for

stock. Such ponds of standing water become stagnant in warm weather, and filled with low forms of animal life, which the researches of science have demonstrated to be the fruitful source of many of the most dangerous diseases, when taken into the system along with the food and water consumed by men and animals. Good, wholesome milk and butter cannot be obtained while cows consume decaying food or impure water. Where stock and milch cows, especially, cannot have free access to a stream of running water, a well should be sunk, and a wind-mill pump used for pumping a supply of fresh water daily for the stock. The trifling cost of such a water supply to any farm, will be much more reimbursed in health and thrift of the stock, and convenience afforded.

The Daily Capital.

THE DAILY CAPITAL made its appearance from the Kansas Farmer Printing House on Monday evening. It is a neat five column paper with news, local, state and general. It is sent, postage paid, four weeks for 40 cents.

Colorado Tourist—This is the title of an elegantly printed tourists' guide to the Rocky Mountain resorts, published by the K. P. R. company. The work is profusely illustrated by the grand scenery of the Rocky Mountains, and contains a geographically correct map of Kansas and Colorado, showing the principal cities and towns with the health and pleasure resorts of the Rocky Mountains.

Mr. F. G. Welch who left Chicago for a Kansas farm near Williamsburg, Franklin county, last November, writes to the *Prairie Farmer*. In the following paragraph, which we clip from his letter, Mr. Welch preaches a whole sermon. It is "brains," well cultivated, truly, which tell in farming, "work alone never progresses." The brain of the farmer needs more cultivating really, than his land. Mr. W., says:

"Who makes the best farmer? It is often said 'every man to his trade.' In the abstract this may be true, but I am surprised to find about here so many men who, like myself, left city for country, and who are to-day successful farmers. The truth is, farming wants more brains with work. Both combined, and farm can be made profitable; work alone never progresses, hence many get discouraged and give up, refilling the large cities and poor houses. So don't be afraid to try the farm if you have any taste in that direction. My children who were born in Chicago take to the cows, horses and pigs, as young ducks do to water, and never tire."

The Bee Interest of Kansas.

The exhaustive Biennial Report of the State Board of Agriculture, contains, among the numerous matters of interest, the bee statistics of the state. Although Kansas is by no means considered a first-class country for bees, yet the data collected by the indefatigable secretary to the Board, Mr. Alfred Gray, makes no mean showing among the important industries of the young commonwealth.

The total number of stands of bees in the state in 1877 was 16,684, which had increased in 1878 to 19,192. The total number of pounds of honey produced in 1877 was 219,717, while the succeeding year, with an increase of 2,508 stands, the yield of honey was 216,004 pounds, a decrease of 3,700 pounds. But we find the wax product of the two years the reverse of the honey crop. In 1877 the product of wax was 3,886 pounds, while the following year shows a yield of 5,680 pounds, or a difference of 1,794 pounds in favor of 1878. If we add to the honey product of this year the amount consumed in making this surplus wax, allowing 20 pounds of honey to be consumed in manufacturing every pound of wax, which has been ascertained by bee-keepers to be about the quantity, we find that to make this amount of wax, 35,380 pounds of honey had to be consumed, which added to the quantity given, would swell the product of honey to 251,380 pounds, showing that the actual bee product fell short but little, if any, of that of the preceding year.

The counties showing the largest number of bees in 1878, are Leavenworth, 2,385 stands; Johnson, 1,407; Cherokee, 1,344; Bourbon, 1,305; Atchison, 954; Doniphan, 937; Douglas, 864. Wyandotte is the smallest county and contains 782 stands, which is about an average showing, computed by area and population.

Computing the honey and wax yield of 1878, the former at 10 cents a pound and the latter at 25 cents, we find the total value of the bee produce of the state, last year, foots up \$23,000, which is but a fraction of what it might be if the farmers would exert themselves to secure the nectar which goes to waste on every farm in the state. Bees should be as generally kept on the farm as poultry, if for no further object of gain than pure honey for domestic use. If what is classed as little things that go to waste on farms, were systematically saved, they would often change a meagre income to a liberal one.

The bee interest should, in common with other industries and sources of wealth, appertaining to the farm, receive a share of attention and encouragement from agricultural societies throughout the country. A very attractive and interesting exhibit might be made in this department, if the proper steps were taken and premiums offered for the finest comb and extracted honey, the best colony of bees, and the most skillful handling of a colony, etc. In some parts of the country the bee-keepers associations are concerting measures to have the honey interest represented at Agricultural fairs next fall.

At some of the agricultural fairs in Europe, where bees are represented, tents formed of wire

cloth are provided, under which the bee-keeper can manipulate the bees in movable frame hives without danger to the audience, furnishing by this means, one of the most interesting and instructing exhibitions of the fair. This hint might be acted on by our agricultural societies with advantage and profit.

The Bean Crop.

The bean crop is a very profitable crop if properly managed, and light, upland, Kansas prairie, we think, would be a most favorable soil on which to grow the small, white, navy bean, the best commercial bean raised. About the 7th to the 10th of May is the proper time to plant in the northern and middle parts of the state and a week or ten days earlier in the southern parts.

In the Genesee valley N. Y. the bean crop is cultivated to a considerable extent, and the yield is 15 to 30 bushels per acre. An experienced grower gives his mode of preparing the ground, planting, cultivating and harvesting the crop, which is economical, and we are persuaded is about the best for handling any considerable quantity. The writer, a Mr. Ives, says, in the *Cultivator*.

When I was a beginner in raising beans, I asked my neighbor Norton, who was quite successful with his crop, how he managed it, to which he replied that all the secret of success with the crop is this: if you undertake to raise beans, you must calculate that whenever they want attention you must leave everything else, no matter what it may be, and just attend to them. I have always found that he was about right.

In preparing for planting, unless that I know that the ground is very clean, I would prefer to Fall plow it, then in the Spring give it thorough tillage as for summer fallow, since it does not cost one-fourth as much to till the ground before as after planting. As soon as I can risk the danger of frost, I plant them, for which purpose I take my wheat drill, using the middle and two outside teeth, planting three rows at a time in drills, using a quart or two more seed than I would need for the crop. I till them by cultivating the spaces, which can be done very close to the beans when they are put in true and evenly gauged rows.

Soon after cultivating I drive a horse with some light drag or scratching implement across these rows. I have had a wheel rake that would do it, but use a tool I have made for the purpose expressly, which works the loose soil between the stalks of beans, and levels down the ridge work previously made by the cultivator. Although this method will destroy a few beans, yet there will be enough left, and they will be far better tilled than we can usually get done by hand. After two such dressings each way the vines will be likely to grow so as to cover the ground, and obviate any further tillage.

For harvesting beans I have made a tool that runs like the plowshare without a mould-board, running just under the rows. This will completely loosen them up, yet leaving them half standing along the row about as they grow. In this condition they will cure quicker, and dry out much better after a rain, than if put in piles by hand piling. I do this with two horses, at the rate of five acres a day.

After a day or two, when they are sufficiently cured, I usually go in the morning while the dew is on, (for then there is no danger of shelling,) with men armed with four-tined forks. Each man taking a row will soon put them into bunches, one by the side of the other, which makes them in windrows the opposite way across the field. Then going between these windrows with the rack wagon, with men to load a row from each side at once, the beans can be housed quite expeditiously. Securing a crop which is managed in this way will give satisfactory returns for land and labor expended.

* A Thomas harrow would be an excellent implement for the purpose.—[Ed. FARMER.]

Land to be kept lively, should never, in any case, be plowed wet. If plowed in this condition it will become cloddy and divested of much of its life-giving properties. Especially will this be the case if dry weather follows. The right stage at which to plow land is when it is sufficiently dry to crumble up nicely when turned over.

For pamphlet on electric treatment of chronic diseases with electricity, which will be sent free, address the McIntosh Electric Belt and Battery Co., 192 & 194 Jackson street, Chicago, Illinois.

Electric Belts.

A sure cure for nervous debility, premature decay, exhaustion, etc. The only reliable cure. Circulars mailed free. Address, J. K. REEVES, 43 Chatham Street, New York.

8 and 9
Eight and nine per cent. interest on farm loans in Shawnee county.
Ten per cent. on city property.
All good bonds bought at sight.
For ready money and low interest, call on
A. PRESCOTT & Co.

Evergreens and Ornamental Trees.

Why not ornament with evergreen trees when you can buy them from 4 to 6 feet high, of E. H. Harrop, at 35 to 50 cents each. Corner Eighth and Topeka Avenue. All warranted in good condition. Will exchange trees for horses or cattle.

Great Merit.

All the fairs give the first premiums and special awards of great merit to Hop Bitters as the purest and best family medicine, and we most heartily approve of the awards for we know they deserve it. The are now on exhibition at the State Fairs, and we advise all to test them. See another column.

Butter.—A new book on butter making sent free on application. Address W. P. Emmert Freeport, Ill.

Why be distressed with headache, low spirits and nervousness, when Ellert's Daylight Liver Pills will surely cure you.

Peevish children have worms. Dr. Jaque's German Worm Cakes will destroy the worms and make the children happy.

For every ache, pain and bruise on man or beast Uncle Sam's Nerve and Bone Liniment is the Balm. Sold by all Druggists.

Uncle Sam's Harness Oil put on your harness, will make the leather look new, and keep it soft and pliable. Give it a trial.

Mother, when your dear baby suffers in teething, use Dr. Winchell's Teething Syrup, it regulates the bowels, soothes the pain and brings natural sleep. Sold by Druggists at 25 cents a bottle.

"A stitch in time saves nine" is not more true in mending clothes, than in getting farm stock through the winter. An economical and sure help is Uncle Sam's Condition Powder. It restores the sick, strengthens the weak, improves the appetite, and will keep the stock in a thriving condition, for it supplies the valued qualities in grass. Sold by all Druggists.

The people have been so much imposed upon by several worthless Sarsaparillas, that we are glad to be able to recommend a preparation which can be depended on as containing the virtues of that invaluable medicine, and is worthy of the public confidence. **Doct. Ayer's Sarsaparilla** cures when anything can cure the diseases that require an alterative medicine.

Verbenas.—1 doz. fine varieties packed and shipped anywhere for 75c.

Bedding Plants.—1 doz. assorted for blooming through the summer, \$1.50 with basket.

Roses.—1 doz. assorted, Tea, China and Hybrid for \$2.50.

And a large stock of other plants cheap. Send for price list. **JOHN KIRCHORABER & Sons, Mattoon, Ill.**

To one and all.—Are you suffering from a Cough, Cold, Asthma, Bronchitis, or any of the various pulmonary troubles that so often end in consumption? If so, use **"Wilbur's Pure Cod-Liver Oil and Lime,"** a safe and sure remedy. This is no quack preparation, but is regularly prescribed by the medical faculty. Manufactured only by A. B. WILBUR, Chemist, Boston. Sold by all druggists.

Paralysis.

Which so often arrests the steps of business men and hard brain-workers after they have passed middle life, might in most cases be prevented by an occasional use of "Compound Oxygen." Nature usually gives a timely warning of the approach of danger from this direction, and they are wise who heed it. Get our "Treatise on Compound Oxygen" and learn all about this new cure. It is sent free. Address Drs. STARKEY & PALEN, 1112 Girard St., Phila., Pa.

Many readers of this paper little think or even suspect that they are the selected victims of a very dangerous disease that is slowly but surely fastening its intestine and cancerous fangs upon their system, and dragging them down to an untimely grave. It is CATARRH in its incipency, and delay in treating it is extremely dangerous. If any reader is desirous of obtaining relief speedily, and a permanent cure, we would recommend to use the remedy of Messrs. Doblyns & Mitchell, North Middletown, Ky. See advertisement in another column.

Man, with all his endowments, is in many things most foolish. He will give all that he hath for his life, but is reckless and indifferent to his health. He will grapple a thief who steals his purse, yet will dally with a cough and cold and finally go into consumption, when such remedy as Ellert's Extract of Tar and Wild Cherry can be easily obtained. It performs rapid cures, gains friends at every trial, and is invaluable in bronchial and lung diseases. It is a safeguard for all, from the babe to the venerable age, and health will be restored by its timely use. No family that has used it will be without it. Sold by Druggists.

Theological students reason that if there be counterfeit money, there must be genuine; so, if there be infidels there must also be Christians. If this be true of money and religion, will not the same rule apply to "put up" medicines? Do not the cheap and worthless nostrums prove that there are genuine and meritorious "put up" medicines? The great popularity of Dr. Pierce's Golden Medical Discovery has resulted in the manufacture of many shoddy alterative and tonic remedies, but one after another these have disappeared, the proprietors having found that, no matter how loud they advertise, success depends upon merit. In South America, as well as in this country, the Discovery is the standard remedy for all scrofulous and eruptive diseases. It acts promptly on the stomach, liver, and blood, toning up, regulating, and purifying the system. It speedily allays all bronchial irritation, and cures the most stubborn cough or cold in half the time required by any other remedy.

The Barb Fence.

The barb fence question is settled, at least so far as which is the best and safest to buy. From the fact that all of the railroads and most of the farmers and stock-raisers of the West are using or intending to use, barb fence, this is a subject that is of the greatest importance, and cannot be too closely examined and fully discussed by the press. We find that the only objections raised thus far to barb-fencing are *crudely to animals* and *dangerous from lawsuits*; and it has been generally admitted that if a barb-fence could be made that would be free from these objections, such a fence would meet with universal patronage, and be sure to supersede all others. Such a fence, we think, we have seen, and is now being introduced by the **American Barb Fence Co.**, whose card will be found in another column. This fence consists of a single wire with a continuous strip of iron wrapped or wound around it, the strip having incisions in one edge, and by such windings the barbs are made to project in every direction. The barbs are so small as to make it impossible to penetrate the side of an animal. This fence is not only a novelty but being so entirely unlike any other, there is no possible chance for infringement, and hence no danger from lawsuits. This fence is offered at prices from 10 to 20 per cent. lower than the barb fence known in Chicago as the "legal fence." We advise dealers to communicate with this company before making their spring purchases.—Des Moines Leader.

Chew Jackson's best Sweet Navy Tobacco.

Horrible!—I suffered from catarrh for thirty years; was cured in six weeks by a simple remedy, and will send the receipt free to all afflicted. Address, with stamp, Rev. T. J. Mead, Syracuse, N. Y.

For a pamphlet on Electric Treatment of chronic diseases with Electricity, which will be sent free, address the McIntosh Electric Belt and Battery Co., 192 and 194 Jackson street, Chicago, Ill.

Money! Money!!

If you wish to borrow money upon Real Estate, and get your money without sending paper East, and at reasonable rates, go to the **KANSAS LOAN AND TRUST CO., Topeka, Kansas.**

Truth and Sobriety.

What is the best family medicine in the world to regulate the bowels, purify the blood, remove costiveness and biliousness, aid digestion and stimulate the whole system?

Truth and sobriety compel us to answer, Hop Bitters, being pure, perfect and harmless. See "Truths" in another column.

Markets.

April, 21, 1879.

New York Money Market.

GOVERNMENTS.—Steady.
RAILROAD BONDS.—Active and strong.
STATE SECURITIES.—Active and strong.
STOCK MARKET.—Unusually active, and the prevailing tendency was toward higher prices. The greatest advance was in Kansas Pacific, which sold up to 49½ an advance of 11 per cent., with closing sales at a reaction of 2½ per cent. The rest of the south-western shares were strong, except Kansas & Texas, which fell off from 16½ to 14½. Granger declined ½ to 1½ per cent. The general list was firm.

MONEY.—4½ per cent.
DISCOUNTS.—Prime mercantile paper, 4½ to 5 per cent.
STERLING.—Dull and weak; sixty days, 4½ per cent.; sight, 4½ per cent.

GOVERNMENT BONDS.

Coupons of 1881.....100½
New 7½.....104½
New 4½ (registered).....106½
Coupons.....106½
New 4½ (registered).....101½
Coupons.....101½
New 4½ (registered).....101½
Coupons.....101½
Currency 6's.....124

New York Produce Market.

WHEAT.—Moderate demand; superfine western and state, \$3.20 to \$3.25; good to choice, \$3.00 to \$3.10; export, \$2.90 to \$3.00; No. 1, \$2.80 to \$2.90; No. 2, \$2.70 to \$2.80; No. 3, \$2.60 to \$2.70; No. 4, \$2.50 to \$2.60; No. 5, \$2.40 to \$2.50; No. 6, \$2.30 to \$2.40; No. 7, \$2.20 to \$2.30; No. 8, \$2.10 to \$2.20; No. 9, \$2.00 to \$2.10; No. 10, \$1.90 to \$2.00; No. 11, \$1.80 to \$1.90; No. 12, \$1.70 to \$1.80; No. 13, \$1.60 to \$1.70; No. 14, \$1.50 to \$1.60; No. 15, \$1.40 to \$1.50; No. 16, \$1.30 to \$1.40; No. 17, \$1.20 to \$1.30; No. 18, \$1.10 to \$1.20; No. 19, \$1.00 to \$1.10; No. 20, \$0.90 to \$1.00; No. 21, \$0.80 to \$0.90; No. 22, \$0.70 to \$0.80; No. 23, \$0.60 to \$0.70; No. 24, \$0.50 to \$0.60; No. 25, \$0.40 to \$0.50; No. 26, \$0.30 to \$0.40; No. 27, \$0.20 to \$0.30; No. 28, \$0.10 to \$0.20; No. 29, \$0.00 to \$0.10; No. 30, \$0.00 to \$0.10.

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