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Agriculture.

For the Kansas Farmer

CLIMATIC CHANGES ON THE PLAINS BY THE PROGRESS OF SETTLEMENT.

BY REV. L. STERNBERG, D. D.

That climatic changes are taking place on the plains and that between these and the progress of settlement there exists an intimate connection, is a fact well established by the observation of intelligent plainmen.

When the first settlers sought homes on the eastern border of the buffalo grass region they found that from early in the fall until late in the spring there was little if any snow or rain. The grass remaining dry was equal to the best hay; while cattle would do almost as well on the range in winter as in summer.

Over the surface was spread a downy cover of buffalo grass free from weed or shrub. Grass for hay had to be sought in ravines where the soil was moist enough for the growth of the taller varieties.

Already in these localities there is a marked change. There is more moisture in the soil. Old springs flow more copiously, while many new ones appear. Irrigation is less needed. Crops become more abundant and sure.

Buffalo grass on account of the depth to which its threadlike roots penetrate the soil can flourish when other grasses and weeds with thicker and shorter roots die out for want of moisture, while where the surface is sufficiently moist these will speedily crowd out the buffalo grass. This latter process is now going on among the settlements along the eastern border of the buffalo grass region. There the husbandman finds the conditions which surround him approximating those of the more eastern farmer and must adapt himself to the changed circumstances or keep in advance of the tide of settlement.

It becomes increasingly difficult to keep large herds of cattle not only because they are liable to trespass upon the claims of contiguous settlers, but also because they can no longer be turned out on the range in winter with little care and no fodder. In short, settlement on the plains tends to convert a purely grazing into an agricultural region.

If the fact be such as we have stated it is highly suggestive. It is in vain for the grazier to contend against fate. He must either move on with his herd, or go to farming and keep no more cattle than he can provide with fodder for the winter.

Those who have pushed out in advance of the tide of settlement must turn their entire attention to grazing until the change in climatic conditions which is sure to come, enables them successfully to cultivate the soil.

The Great American Desert, with slight exceptions, will, at no distant day become a vast agricultural region, sufficiently irrigated by the clouds of heaven to produce all the bread and beef required by the teeming millions of Europe as well as our own country. The necessity of an irrigating canal from the Rocky Mountains to the Mississippi will be superseded by the time there is a population to require it.

Were the engineering difficulty in the way of the construction of such a canal overcome, and were the expenses provided for, and were all the rivers that flow eastward from the Rocky Mountains to pour their waters into it, and were it attempted to irrigate a belt of land no wider than that of the Kansas Pacific land grant it would be drained dry hundreds of miles from its eastern terminus. We mention but one more consequence of the important fact to which we have called attention. The centre of population of the United States will, at no distant day, fall west of the Mississippi river. The east will have more people but the west will have more.

Should any question whether the progress of settlement on the plains tends to modify climatic conditions a glance at some of the causes may remove every lurking doubt.

1. Settlement tends to arrest the progress of prairie fires. Where there is no settlement almost the entire surface of the country is burned over every year. This generally occurs in the fall and leaves the land lying for months as bare and dry as a bone. The disastrous effects of these fires reach far beyond what is consumed at the moment. They are

projected into the following summer, producing a dryer atmosphere and a feebleness of growth of vegetation than would otherwise obtain. When rain falls upon such a surface it is not the protracted drizzle with which people at the east are familiar. It pours down in torrents and runs off as from a duck's back. Let the earth be covered with vegetation and a proportion of the rain that falls penetrates the surface, evaporation is more uniform, the superincumbent atmosphere is more moist and showers are more frequent and not so much like a sudden deluge.

Another of these causes consists in breaking up the surface by the plow. Though vegetation pumps a large amount of water from the soil yet a cultivated field is never so dry as one that is bare and compact.

We shall perhaps more readily admit the correctness of this position if we compare a squeezed with an unsqueezed sponge, or the beaten highway in a dry time with the untrodden meadow adjoining.

In a loose soil there are millions of mouths open to drink in the rain as it falls. In a hard one they are shut.

While in central and western Kansas we are not apt to be troubled with excessive rain interrupting the labors of the husbandman as is often the case farther east, yet there is no part of the state that would be too dry for tillage could the rainfall be utilized. This is done in proportion as the plow does its work. The more water from the clouds permeates the soil the more is sent back by evaporation into the air, keeping it moist and adding to the frequency and copiousness of showers and the abundance of dews.

Another of these causes is found in the fact that with increasing settlement there is a multiplication of forest and fruit trees. The opposite result follows the settlement of a wooded country. The timber is apt to be ruthlessly destroyed until sterility falls like a withering blast upon the land.

Even on the plains where there is so little timber the woodman's axe is often swung ruthlessly. Still there is more timber grown than is destroyed.

Where prairie fires are arrested, trees spring up spontaneously in favorable localities. Were it not for the browsing of domestic cattle and the destruction caused by rabbits and beavers the forest growth would be ten fold more rapid than the consumption of wood by the settlers, even should none of them enter upon the cultivation of fruit and forest trees.

The umbrageous streets of many of our prairie towns, the clumps of trees about many of our farm houses, the many orchards and groves under cultivation, all go to show that the settled portions of the plains are beginning to reap the benefit of a more humid atmosphere and more frequent showers. Nor is this all, in proportion as trees increase they obstruct the sweep of the winds and prevent those sudden changes and those extremes of temperature to which treeless plains are exposed.

[To be continued.]

Early Melons.

Gardeners generally find it difficult to get as early melons as they would like, for the reason that they will not bear transplanting. I have tried a way by which they can be started early and transplanted when wanted. Save all the pasteboard collar boxes, and fill them with the best soil. Any kind of boxes will do; they can be made of wood with bottoms tacked on. After warming the soil, plant the seed, about five to the box. They can now be sunk in the hot-bed, or if you do not have one, they can be kept in the house by the stove. When the young plants are large enough they can be transplanted. After making the ground mellow, make a hole the size of the box; then slip out the bottom, and the earth, with the plants, will slip through without being disturbed. This plan will do for other plants besides melons, as cucumbers, &c., the tender egg plant, and some varieties of flowers. By starting plants early in this way, several weeks can be gained.—*Prairie Farmer.*

A small hot-bed can be made with a few old sash and fence boards in an hour. There is really no necessity of making one such as a market gardener would want; four boards nailed, say 14 feet by 5 to 6 feet, a little heated manure thrown on the ground, the frame set on it, and then banked with manure, some soil, lights and some covering, and a farmer would make a bed which would start the garden two months earlier, and in many cases give two crops.

Horticulture.

For the Kansas Farmer.]

"TREELESS PLAINS."—II.

Reply to C. W. Johnson.

BY S. T. KELSEY.

Mr. Johnson in his "Treeless Plains No. 1," tried to prove that our country is so situated in relation to large bodies of water, mountain ranges, etc., that very little moisture could reach us.

But we showed by statistics from official reports, that we have more rainfall here during the growing months of spring and summer, than they have in the country which according to his theorizing should be most favorably located, and before he gets through he admits that we have an annual rainfall sufficient for tree growth.

In his "Treeless Plains," No. 2, he claims that the native growth of plants, is such as is found on all treeless plains, and says "if the language of our herbage is rightly interpreted, it would seem plain that to compel trees and shrubs to grow which in their nature are disassociated from these tribes of the arid regions, must ultimately end in failure." We say, then the language of the herbage is not rightly interpreted by Mr. Johnson, and all of the facts he adduces in his learned botanical, meteorological and horticultural disquisition, shows only that some plants thrive in the cool shade and still air of the forest, while others grow best exposed to the bright sunshine and free wind of the prairie.

Clear up the "moist wood lands," where as Mr. Johnson says "we find the leaves of the plants characterized by being soft and succulent with their epidermis thin and their growing shoots tender," where "are found an abundance of ferns, mosses and water leaf plants," and immediately the native plants of the forest disappear, and an entirely different class of plants spring up and thrive while the field is cultivated. Turn it into meadow and most of the plants that grew in the cultivated field will die out and another class of plants will take their place. Use it for a pasture and there is still another change in the character of the herbage. Plant it in trees and soon as the ground becomes shaded the ferns, mosses and other native forest plants reappear.

The forest plants will not endure the sun and wind of the open field, and the natives of the field and prairie soon smother and perish in the shade of the woods.

We may find on a single farm of a few hundred acres—where but a few years since there was no material difference in the herbage of the different parts—all the gradations from the ferns, mosses, etc., of the forest, the luxuriant herbage of the cultivated field, the common grass and weeds of the meadow, to the short fine grass and hard weeds of the old pasture field, mainly of the composite and other plants common on the treeless plains. During the later part of the summer the grass and weeds become dry and the old neglected pasture field of the east presents very nearly the appearance as our buffalo range. Take the cattle off the pasture and a taller, ranker vegetation springs up.

As the buffalo are driven back on the western plains, taller grasses and more succulent weeds appear, and smother and kill out the short buffalo grass and other "plants of desert lands." If the fires are kept out the timber growth spreads out on the prairie in vigorous healthy groves. Break up the soil and like the old pasture field of the east, the ground works up mellow and lively and retains the moisture.

Even Mr. Johnson, after trying to prove the extreme dryness and hopeless desert condition of the country practically gives up the question, and beats himself. He says, "It may be inferred from the tenor of these papers that the writer is of the opinion that this country is not a fit habitation for civilized men." We drew that inference and were anxious to know whether his No. 3 would likely be written at headquarters of Apache braves or in some cool and shady bower where he could "turn to the Atlantic for relief" and bask in the delightful breezes that "flow off to the north east, scat-

tering plenty in their course." But right here he comes to our relief, and says:

"Not so, our rich soil and long interval between frosts make it excellent for grasses, and for many of those things which can be matured before the dry season sets in; small grains we know from experience, generally succeed well. Corn gives a full yield, seemingly three years out of five, at least this is the case since 1868, counting 1869 as a full yield. Experience teaches with this crop that its critical period is the fourteen days that follow the tassel season * * * Experience teaches us too, that as most of our corn is tilled this critical period corresponds very closely with the average period of the greatest drouth."

Then it can not be so bad a country after all. It is excellent for grasses; small grains generally succeed well and corn which is at its critical period during the season of greatest drouth, makes a full crop three years out of five. Can any state in the Union show a better record, and yet he claims that trees won't grow successfully, and what seems to be a success is only a myth.

He says, "It is not denied that there is what seem to be promises of success founded upon actual experiment. Trees are planted upon upland, and while small enough to admit of thorough cultivation for a few years promise well, through few of these incipient forests passed the ordeal of '00, and gradually die out while yet saplings." Now this same kind of nonsense has been talked ever since the first white man set foot on prairie soil. The same thing was talked in Illinois, and abler articles written to prove that the Creator never intended trees to grow there. If a dead tree could be found, men were ready to shout "I told you so!" "You might have known that trees would not grow here!" But earnest practical men like Bryant, Phoenix, Douglas and others worked away testing, growing, and distributing, some failed but others grew into productive orchards, valuable groves, and beautiful, healthy specimens of ornamental trees, adding many millions to the wealth of the "Garden State." It may be only a seeming success, few of them have passed the ordeal of more than 20 or 30 years, some of them died out while yet saplings, and doubtless the rest will die in course of time.

Most of our tree planting has been done within the last eight or ten years, and consequently are of that class which Mr. Johnson says promise well. The few that were planted before '60 were largely of locust, cottonwood and silver maple. The locust grew well and seemed perfectly hardy and healthy, but the trees were killed here as elsewhere by the borers—perhaps irrigation might have saved them. The cottonwood and maple are trees that require considerable moisture. They were mostly planted out in single rows, the prairie soil being scarcely broken. The cuttings or young plants were stuck into the hard ground and usually left to take care of themselves, and make their way against stock, grass and weeds. The "ordeal of '00," found them in this condition, and such as were standing on hard-pan or stiff clay sub-soil close to the surface were severely injured or killed; but many of them survived all their difficulties and we may see around the older settlements, here and there "apparently" as thrifty and healthy as ever.

When Mr. Johnson calls for reports from those who planted trees in 1855, 1856 and 1857 he must know that there was no planting to any extent done on upland prairie at that time.

What would he think of the intelligence or honesty of the court that would attempt to convict a man for a murder committed years before he was born.

A word about that winter killing, the complexity of which he so ably and beautiful illustrates that I copy it entire and advise every tree grower to read it carefully and then cut it out and save it for future reference.

"Much of this dying of trees became first apparent in the spring and we ascribe it to hard winters, forgetting that such trees frequently grow where the temperature falls ten degrees lower than our lowest.

The killing of trees by cold in such cases is like the killing of grape vines after they have suffered from defoliation the previous summer. The cambium, that soft layer which lies between the bark and the wood of all woody

growths, laid up to feed the buds of the next season, is not fully elaborated, and there being in the spring nothing to support the buds while being developed, they perish and with them the vine. I do not assert that cold will not kill a tree, but rather than the so called winter-killing is more complex in its origin than is commonly believed, and that on these plains of drying winds and sudden changes it frequently happens that the ability to withstand a low temperature, depends upon how near mature they were when their foliage was withered off in the summer's heat; sappy twigs and imperfectly formed buds being less able to withstand the drying and freezing of our winters than when mature."

The facts are, as every tree grower in the state knows, that while our long seasons, fertile soil and plentiful summer showers, give our trees a better growth than they get in any of the timbered countries of the eastern states, our long mild autumns ripen the growth here better than there, and the majority of our trees retire to rest in the most perfect condition to withstand the cold of winter and make a vigorous start for a new growth the next season.

The buds are full, plump and ripe. "The cambium that soft layer which lies between the bark and wood" is "fully elaborated," and is ready in the spring "to support the buds while being developed." The withering off of the foliage, sappy twigs and imperfect buds that Mr. Johnson talks of, are simply emanations of the imaginations. All persons who have handled them alongside, know that cuttings and scions from Kansas trees are better material and the wood more firm and seasoned, than scions from eastern trees.

Trees will sometimes winter-kill even in Kansas. Some kinds kill so badly that they should not be depended upon. But they will kill out elsewhere, and as a rule, our trees in the nursery, orchard and forest stand the winters here as well as in the eastern states, and to all appearance, bid fair to be as long lived here as there.

But another discovery quite as wonderful as that trees winter-kill from causes that do not exist, is that the extreme dryness of the atmosphere causes the trees growing along our streams to "lean to and droop over the water," this is so remarkable, that he calls attention to it in both articles, No. 1 and 2.

Now it must have taken a vast amount of botanical, horticultural and meteorological research to discover this, for it is known that trees growing along the banks of streams everywhere, lean to or hang over the water the same as here. And the wonderful part is, that Mr. Johnson should either not have noticed it himself, or supposed that nobody else had.

He asks, "What shall be said of fruit growing in Kansas?" We reply. No other state in the Union, except perhaps, California, ever produced so many bushels of good fruit or could show so many good orchards in so short a time from its first settlement. Our oldest orchards are found along the bluff of the Missouri and Kaw rivers; but there are hundreds of orchards all over the settled portions of the state, "remote from the friendly emanations of those streams." The best of them are on our highest and driest lands.

We have had but one winter that has seriously injured our orchards since the state was settled, and that was the winter following the unusually wet summer of 1872; and the orchards on high dry lands, in exposed situations, received least injury, as a rule.

Leavenworth, Atchison and Lawrence import apples because the concentration of people there, has been more rapid than the growth of trees, and they are depositories of supply for a half million of people, a majority of whom have not had time to grow an orchard since they came to the state. Most of our orchards have produced good crops every year since they were old enough to bear, and I believe we have not had one single season of failure since the first orchards commenced bearing. I know we have not had a failure in Southern Kansas for ten years.

Pear trees blight here as they do in the states east of us and no more.

In conclusion of this article, I will say that to my mind the ultimate and complete remedy lies in planting and tending trees of suitable varieties and in a short time we may have all the good fruit we need, and plenty of healthy trees for ornament, shade, fuel, timber, etc.

I deem it proper to add some conclusions which seem to me to be deducible from what has been advanced.

1st. That "we have an annual rainfall sufficient for tree growth."

2d. That it comes at the season of the year "when it is most available" for tree growth.

3d. That our rich soil, long seasons and favorable summer showers give our trees a better growth than they usually get in the eastern states.

4th. That the most of our trees mature their growth here better than in the east, and consequently are no more liable to winter-killing here than there.

5th. That fruit trees succeed best on our highest upland prairie soil, and that forest trees grow well in the same situation.

6th. That contrary to Mr. Johnson's theory the large leaf trees, such as cottonwood, catalpa, box elder, black walnut, silver maple, alantus, silver poplar, etc., grow well and will doubtless be among the best trees that we can plant.

Finally, the man who would instruct other people on an subject should first know something about it himself.

Office theorizing may serve to while away the leisure hours of a briefless lawyer, but the earnest workers of the west who are making farms and homes on these prairies, want practical facts rather than fine spun theories that prove nothing but the ability of the writer to draw conclusions from his own reasoning.

If any man wants to dam the ravines and streams on his farm and thus save the water for future use we shall not object, but we do insist that no individual or corporation, has the theoretical, moral, legal, or physical right to dam(n) the whole country.

For the Kansas Farmer.

TREE GROWING IN KANSAS.

BY NEW-YORKER.

There have been published in late numbers of the KANSAS FARMER, articles upon the planting of forest trees and culture of certain fruits, which, if correct in their premises, are most discouraging to those who have contemplated making Kansas their future homes, and knowing the scarcity of timber, have thought to supply the want of it by planting trees to beautify the bare prairies and shelter their homes from the strong winds and fierce storms to which the country is subject. The writer of the articles referred to speaks very positively and decidedly of the utter folly of any such attempt, except in certain peculiarly formed situations, giving as reasons the operations of certain natural laws governing the winds and moisture, which makes it impossible to grow trees with any great success in Kansas. His arguments seem conclusive, if they are correct, but it seems to me no more damaging statements could be made regarding the disadvantages of any country than are contained in those articles. No trees to beautify our homes; no fruits to gratify our taste; a home on a bleak prairie, with perhaps the satisfaction of being able to raise a crop of wheat or corn in very favorable seasons, and fatten cattle and hogs.

Now, I don't want to farm for the mere sake of making money. I must have pleasant surroundings, or it would be unendurable. I would be willing to wait for the growth of trees, for that would be a pleasant anticipation, and the unprotected house could be borne with, knowing that it would soon be sheltered and shaded by my favorite trees. Unfortunately, before I read those articles I had invested in Kansas land, such also in which, according to his theory, trees can never be successfully grown—a high prairie. On this land, rich and desirable, but destitute of timber, I had contemplated planting trees for timber and ornament, to shelter and adorn my future home. I realized fully its greatest drawback, and intended to do all in my power to remove it, but it seems I have been laboring under a delusion, and it is no use to try and raise trees in Kansas, but one must content himself with raising cattle and hogs, once in a while getting a fair crop of corn or wheat. If Mr. Johnson is correct in his statements, all my anticipations of making me a pleasant home in Kansas must be given up, and the best thing for me to do is to sell my land, even at a sacrifice.

But I trust that others will come forward with facts to controvert his theories, showing by actual experience that they have been successful in raising forest and fruit trees, even on high prairies and remote from streams, and indirectly Mr. Kelsey's article in the last number of the FARMER disproves Mr. Johnson's arguments in showing that he has planted and raised trees under the most unfavorable circumstances.

Albany, N. Y., March, 1874.

For the Kansas Farmer.

Letter from Mr. Mehan.

EDITOR FARMER: In your issue March 4, I find the following in the address of Mr. Kelsey:

"Mr. Thomas Mehan, of Philadelphia, editor of the *Gardener's Monthly*, argues that trees must make a country dryer because the earth under growing trees is dryer than in the cultivated field adjoining."

Mr. Kelsey must be mistaken. I think he cannot quote me as making any such assertion. Indeed I have taken no part in affirming any theory in regard to the influence of trees in modifying climate. All I have done is to show why the reasoning of other parties who affirm trees in a measure make climate, is not satisfactory to my mind.

Trees may have the tremendous influence claimed for them—and there may be people like us, inhabiting some of the planets, I do not say these things are not so—I only say, I do not know of sufficient evidence to warrant me in believing them; at the same time I have no fault to find with those to whom popular rumors or casual impressions are as good as demonstrated facts. It is the way of the world. It was only when a gentleman of scientific character, sought to make these popular impressions take the place of usual scientific methods of research, in a popular scientific association, that I objected.

Trees may have all the influence on climate claimed for them by Mr. Kelsey and his friends, my position is that I don't know whether they have or not. The reasons given are not satisfactory to my mind, and therefore I do not believe it.

This is my position,—nothing more.

THOMAS MEEHAN.

Germantown Nurseries, near Philadelphia, March, '74.

Horse Department.

OWNERS OF TROTTING HORSES.

The rules now in force of the National Association for the Promotion of the Interest of the American Trotting Turf required the post-office address of the person or persons making the entry of the horse, together with the name or names of the owner or owners, shall be given; but as some of the members of the Board of Appeals have decided that this clause does not authorize the Secretary of a park to make public the name or names of the owner or owners, possibly it would not be out of place for the National Association convened in Congress to render the rule a little more specific. Under the present interpretation of the rule, the general public is kept in ignorance of the ownership of the horses which compete in the many races which take place each season. The horses are trotted in the names of the men who train and drive them, and if a fraud is committed the drivers have to shoulder all the odium. The gentlemen who purchase the horses for the turf, as a common thing, are impelled by no higher motive than that of gain. Their chief object is to make the business pay. When a victory is won the public does not know who to congratulate and applaud, for the reason that the owner, so far as its knowledge goes, is a myth, or at best a mystery. Those who contend for honor on a fair field are not apt to hide their light under a bushel. They must be known in order to receive the reward. Nothing has added so much to the dignity of the running turf as the custom of making and publishing an entry in the name of the owner of said entry. A gentleman should never engage in anything of which he is ashamed. If he has a fondness for the turf, let him acknowledge that fondness to the world, and thus openly contribute his influence to raise the pastimes of the course above suspicion. The very fact of an owner skulking behind the name of an employee affords sufficient ground for the hypercritical to question the honesty of the sport. Throw off your masks, gentlemen, and bravely stand up for the integrity of the institution which you patronize, and from which you derive a profit.—*Turf, Field and Farm.*

HOW TO BREED A GOOD COLT.

HARK COMSTOCK condenses from Mr. MURRAY's book, the following suggestive sentences: Whoever wishes to breed a fine colt must be willing to put himself to a certain amount of trouble and expense. There is an old saying, that "the gods never drop nuts already cracked into men's mouths." * * * now the country is full of men who are ambitious to raise a five-hundred-dollar colt, but who are at the same time unwilling to be at any considerable trouble or expense to do it. They wish the five-hundred-dollar colt, but they do not wish to get it in such a way, that it shall not cost them over fifty or seventy-five dollars. * * * It is needless for me to say that such an expectation is futile. * * * It is not difficult for an intelligent breeder to raise a five-hundred-dollar colt; it is not extravagant for such a person to expect to raise a colt, which, at five years of age, shall command a thousand dollars for every year of his age; but it costs time, attention and considerable money to insure such a result. An ordinary dam will not produce such a colt. An ordinary stallion will not beget such an animal. Stallions whose services can be obtained for ten or twenty dollars, and mares of low blood and negative characters, can never beget or conceive such a foal.

The great fault in our common stock of horses, is want of size—lack of bone and substance. Year after year the country is scourged by buyers in search of large horses, and every thing that bears the shape of a horse, if it only be large, sells readily at good rates, while the little ones can scarcely be got rid of at any price.

It is manifestly, then, the best policy for the farmer to adapt himself to this state of things and raise large horses; and here the question appropriately comes in: How shall we breed them? The advocate of the trotting horse will answer, "Breed to a large trotting stallion." The admirer of race horses will say, "Breed only to a thoroughbred race horse of good size"; but we will answer both by saying, gentlemen, the principle that "like produces like or the likeness of some ancestor" is a well established one among breeders. Your horses are of all sizes, and have been bred for nothing but speed. The "family tree" which produced your horse, has borne all kinds of fruit—has produced more little horses than big ones. Yours happens to be a large one but no reliance can be placed upon his getting foals that will resemble him in his particular, or in any other. They will be of all kinds and sizes as his progenitors have been. Your trotting stallion, especially is a mixed up dish—a regular plate of hash, while your thoroughbred race horse is apt to be too nervous and high strung for our purposes, but we will admit that a little of his blood will do us good if we have something along with it to tone it down, and ensure greater size and substance.—*Farmers Journal.*

PARING THE FROG AND BARS.—It is painful to notice the crippled state of the feet to which the plan of paring away the frog and bars, and the tight nailing on both sides of the feet, reduces the draught horses in London; and a practiced eye can often detect the evil in the best appointed equipages, where it is not apparent to the unskilled observer, owing to the effect of another cruel contrivance—the tight bearing-rein—in altering the natural action of the horse. We are very much inclined to believe that an improvement in this respect, which every cabman can secure for his horse—the simple measure of leaving the frog and bars uncut—would do more even than the adoption of a better kind of pavement, to obviate accidents. It is pitiful to think of an animal struggling with all the good will in the world, to draw his load along a crowded street full of obstructions and sudden checks, and having to contend, in addition to the natural labor and difficulties of the case, with a rein holding up his head so as to prevent him putting his strength properly to the act of draught; and further, with all four feet encased in what must often be, to him, very much what walnut shells are to an unfortunate and imprisoned cat.—*London Echo.*

EXPORTATION OF ARAB HORSES.—So great has been the exportation of Arabian horses to other countries, that the breed has become scarce in many parts of the empire, and to preserve it—in the provinces of Bagdad and Syria—exportation has been prohibited for the next seven years.—*Live Stock Journal.*

The Flower Garden.

ROSES AND THEIR CULTIVATION.

We take the following extract from an essay by Chas. H. Miller, Mt. Airy Nurseries, Germantown, Pa., published in the *Gardener's Monthly*:

ONE of the conditions essential towards success in rose culture is the preparation of the soil. Good loamy soil requires very little preparation beyond the usual trenching and manuring. It must be understood, however, that if the soil is wet, draining will be necessary, for it is useless and wasteful to put manure on wet soil. In all such cases then, the first effort must be to drain the soil. Thorough draining aids the ground to whatever depth it drains off the water; therefore it is best to drain deep. The worst of all soils for roses are those of a light dry sandy or gravelly nature. In such soils roses often suffer from the dry weather in the hot summer months, and are liable to the attacks of the red spider, one of the worst enemies the rose has to contend against, and which is not easily kept under subjection in hot dry seasons.

PLANTING.—Under this head, I will take occasion to say, that the planting of roses as isolated specimens on a lawn, is in my opinion almost always a mistake, in fact an error in good taste. There are few, if any, that ever form under such treatment, an object sufficiently well foliaged to be pleasing, or even an object of interest when not in bloom.

To produce the best effect with roses, continuous blooms should only be used; such as Hybrid perpetuals, Teas, Bourbons and Chinas. Summer roses that bloom once in a season and no more are useless except for exhibition purposes. If you desire to have summer roses—and none are more beautiful when in bloom—let them have a place by themselves. Never let them mar the effect of the others, by planting among them sparse blooming kinds, when by a judicious selection of monthly bloomers a complete succession can be had of beautiful buds and blossoms, and the rose garden kept in perpetual and ever increasing beauty.

TRANSPLANTING.—As roses flourish better for an occasional transplanting, and their bloom and foliage is always finer in cultivated than in grassy ground, a biennial lifting of the plant should form a part of their culture. The process will enable the cultivator to perform the operation of root pruning, often a very important matter with the strong growing kinds. And all who desire their roses to bloom satisfactorily in the autumn, should embrace the opportunity thus offered, to enrich the soil by deep trenching and by well rotted manure.

The sowing of seeds of annuals is one of the leading occupations of this time of the year. Much of the ill luck which comes from rotting in the ground. A rain comes after sowing, and if the seed has partly swelled, it easily rots by being a few hours under water. To avoid this, sow on the surface, and close the earth over with a trowel. It is even a benefit to make a little mound of a half inch or so, before sowing. Then it will make no difference if the rain continues for a week, the seeds will always be above the level, and never get saturated. Another little thing, often neglected by seed sowers, is to mark the place where the seeds are sown. A little stick set in the ground will be found useful, as all who have not done so will readily understand. In older times this was always attended to, and a little stick made in it, in which the name on the paper was neatly folded and set. Of course a neat label looks prettier, but somehow those people of the olden times, who followed those primitive ways of naming their plants, knew more about them than many of the moderns. Only the hardy annuals must be sown in March; those which are tender must be reserved until the soil and weather is settled warm. We need not give a list of these, as every seedsmen has now these particulars on every package he sends out.

If flowers have been growing in the ground for many years new soil does wonders. Rich manure makes plants grow, but they do not always flower well with vigorous growth. If new soil cannot be had, a wheelbarrow of manure to about every fifty square feet will be enough. If the garden earth looks grey or yellow, rotten leaves—quite rotten leaves—will improve it. If heavy, add sand. If very sandy, add salt—about half a pint to fifty square feet. If very black or rich from previous year's manurings, use a little lime, about a pint slacked to fifty square feet.

Prune shrubs, roses and vines. Those which flower from young wood, cut in severely to make new growth vigorous. Tea, China, Bourbon and Noisette roses are of this class. What are called annual roses, as Prairie Queen and so on, requires lots of last year's wood to make a good show of flowers. Hence, with these, thin out weak wood, and leave all the stronger.

The attention which has been given of late years to hardy herbaceous plants, is encouraging the introductions of new kinds. There have been some grand additions to the Columbine. We have the white and purple of the north of Europe, the beautiful Aquilegia cerulea, with large blue and white flowers; the rich crimson A. canadensis of the Eastern States, and now the yellow long spurred A. chrysantha of southern Utah and Arizona. When these come to be hybridized and mixed up, it will make a charming and popular race of American garden plants. In the adornment of gardens and grounds much use is now made of the dwarf forms of evergreens. Since the introduction of so many golden forms, all of which have proved more hardy than the silver tints, they are grown in masses, and make excellent features. The common evergreen ivy, with its numerous varieties, are grown in masses for bordering. When growing up against the walls of our houses, they are often injured or destroyed in the winter; but when trained, or left to trail on the ground, dry leaves, with some brush on to keep them from blowing away, make an efficient protection. The new Euonymus radicans variegata, is an excellent thing to match with ivy grown in this way.

Every one likes to have hollies and magnolias, but they have the reputation of being hard to transplant. But cut in severely when moved they always do well, and are amongst the most successful of transplanted trees. This little hint about pruning at transplanting may be applied to most things. There are very few kinds of trees that are not benefited by the practice, though often trees will get through very well without it.

It is sufficient to dig garden soil only when the garden is warm and dry. Do not be in a hurry, or you may get behind. When a clod of earth will crush to powder when you tread on it, it is time to dig—not before.—*Gard. Mo'y.*

Poultry Notes.

CHOICE OF BREEDS.

We make the following extract from a paper read by Mr. J. K. FOWLER, before the Midland Counties Farmers' Club, Birmingham, England:

In choosing the breeds, soil and climate must be taken into consideration, as also if they are to be carefully attended to, or allowed to forage for themselves in a rough way. The most hardy he had found to be the Brahmas, both light and dark, and all the varieties of the Cochins. Both Brahmas and Cochins laid and set well, and reared their chickens; and although they were considered coarse for the table, he did not think so. These breeds might be advantageously crossed by the Dorkings, and famous table birds would be the result, with great size and quality.

Game fowls were very hardy and good foragers, fairly good layers of delicious eggs, and were juicy and excellent for the table; but their pugnacity rendered them dangerous with other fowls. Where eggs only were required, Spanish, Houdans, and Crevecoeurs were most excellent, as also were the White Leghorns. These all laid the eggs, and were non-setters. The Houdans were good layers, but their eggs were so small that for market purposes they did not make so much as the larger varieties. Where the farmyard was dry and threshing was constantly going on, Dorkings were the best, but he had found them difficult to rear and rather delicate in constitution; but, when they could be reared easily, nothing made more money in the London market than the Surrey or Dorking fowl.

The French varieties which had lately been introduced into this country were most valuable, and, he had no doubt, would shortly be found prevalent in the hamlets and roadside residence of our rural population, as they were hardy, good scavengers, and better egg-layers throughout the year than any others. The Houdans and Crevecoeurs were both admirable; they were non-setters, and so it would be useful to have a few Cochins. Hens were fine rear their young. Spanish fowls were fine layers of splendid eggs, and were white and juicy birds for the table. He had during the year imported from America some of the White Leghorns—extremely pretty birds, wonderful layers, and very hardy.

The majority of keepers only care for good useful fowls, that will lay plenty of eggs, raise healthy chicks and prove acceptable when brought to the table; age, color and previous condition of servitude being secondary conditions. For such we would recommend fowls having a strong infusion of Asiatic blood—Brahmas or Cochins, or their crosses, as being in many respects adapted to their purpose, as they make hardy vigorous birds of good size, are fair layers, quieter and more easily confined to the space allotted to them, and although not equal as table fowls to some of the smaller kinds, are by no means objectionable, the difference not being appreciable to most people.

In selecting fowls for breeding, those well matured should always be chosen, if not so far advanced in age as to impair their vigor. Adult fowls produce larger, stronger and healthier chicks than young ones, and nothing produces more rapid deterioration in a stock than the practice of retaining only young fowls for breeding purposes. A comparison of the number of eggs laid by a pullet and a two year old hen will disclose less difference than is generally supposed. The pullet will lay more eggs without intermission, but the time required for rest and recuperation will be longer, making very little difference in the year's yield.—*Natl. Live Stock Journal.*

Hints for Spring Work.

ONE lesson of 1873 is very emphatic in its commendations of early seeding. So, also, are the lessons of the years before. All through Central and Northern Iowa the farmers agree that they failed in corn from late planting. But early planting demands good surface drainage. It will not do to expect that an inch or two of water will be evaporated from the surface, and leave the ground warm, in time for early planting. Evaporation produces cold. It is the cold that destroys the seed. Warm rains that percolate through the soil, or escape from the surface, never rot the seed. It is the cold that comes from the evaporation of surplus water on and near the surface that does so much to delay planting, and shortens the season at the wrong end. Forty degrees of north latitude will not admit of shortening the summer by using the best part of it for drying the soil; much less may it be risked in forty-two or forty-four. Open the drains; carry off the surface water; if you cannot get dry to the low spots with the plow, don your muddy boots and take the hoe. The work of an hour at the right time in getting rid of a ton of water may make you a ton of corn. Deep plowing will help to dry the ground after rain; and though the impression prevails that much of our rich land may be worked without damage when wet, there is less of such land than many imagine. It may not bake and become cloddy and rough as clayey lands with like treatment, but still the close observer will notice that injury is done by such treatment in nine cases out of ten. Do not plow or harrow the land when wet.—*Farmers Journal.*

It is time to sow grass seed. If the ground is well prepared, and not foul, we think it will pay to sow grass seed alone. It will not pay to sow with oats, except in rare cases. Barley is recommended as a good crop with which to seed grass; rye is good; and it often succeeds with wheat. Put on plenty of seed, especially if sown without grain. Eight quarts of timothy and two quarts of clover would not be too much for an acre, where sown without other crops. It is best to put on plenty of grass seed, in any case, and then be careful not to smother it with grain. The value of grass is not generally understood. Those who have thoroughly tried it regard the pasture as of more value than the profit on the same acreage in grain. To this add the value of the hay taken from the same land and you have *treble* returns. If this be not enough, the rest is made up in the increased fertility of the land in one case, as compared with the decreased fertility in the other. Sow grass seed; sow it often; sow it on broad acres.

Put everything in perfect repair.—If you are near a blacksmith and wheelwright's shop you can probably get the work done cheaper and better than by doing it yourself. But many little things that can be repaired at home in less time than is required to take them to the shop.

Patrons of Husbandry.

To Deputies.

The various Deputies will greatly oblige us by sending lists of Granges, when organized, for publication in this column.

It is requested that all Granges within the State report the names and postoffice address of their Masters and Secretaries, elected for the ensuing year, to the Secretary of the State Grange, G. W. Spruozon, of Jacksonville, Neosho county, Kansas.

It is also requested that each delegation from every county report the names and postoffice address of the Masters and Secretaries of the Subordinate Granges of their respective counties at the coming meeting of the State Grange, on the third Wednesday of February next.

G. W. SPRUOZON,
Sec. State Grange.

Organizing Granges.

Those parties wishing instruction in the work of the Order, or information concerning the organization of Subordinate Granges, will hereafter address me (enclosing stamp, if possible):

W. S. HANNA,
Chaplain, State Grange,
Junction City, Kan.

For the Kansas Farmer.]

CHATS WITH PATRONS AND REPLIES TO CORRESPONDENTS.

BY W. P. POPENOE.

H. E. E. Rossville.—I should say the dues of a member should commence when he is initiated, as he might not go to the fourth degree for six months, and yet be receiving all the benefits, financially.

W. C., Wabunsee.—It is not necessary that the Master of a Council should be Master of a Subordinate Grange. Therefore, you can elect any delegate as Master of the Council, this will answer others, also.

J. B., Osage.—I see no reason why a sister should not be elected Chaplain, although it has not been practiced as yet. Ladies are frequently elected to the office of Secretary, and make good ones too.

Call and see Capitol Grange, the next time you come to the city.

Write to Master Hudson about Deputies. I did assist in the examination of those who made application, but the appointment is entirely with the Master. The committee only reported whether they were proficient in the work, or not.

J. M., Johnson co.—The usage and law in many Granges in matters of grievances, is to refer the controversy to their trustees or arbitrators, and let their decision be final. It should be the rule among brethren not to go to law, but decide all matters of grievance among themselves. If a brother refuses to do this we would prefer charges against him, as guilty of conduct unbecoming a member of the Order.

D. H., Osage co.—A Grange cannot suspend a member without charges first being preferred against him, and trial had, and vote taken. This is no guess work but plain law and justice to all.

R. J., Rice co.—In answer to your first question: Can you propose and initiate a person the same night under any circumstances? I answer, No, sir: contrary to Constitution. In answer to your next question: What will make a cow give down her milk? Well, now, I don't know as that is just in my line, as a Granger, but I guess it is, at least I will give you the benefit of the doubt, as the lawyers say, and tell you what I know about it, I saw some month ago, that if you would lay a chain over the loins of a cow she would give down. I find it works admirably. If you rattle the chain a little, all the better. But I would advise you to stand a little back, as the boy and bucket is most sure to come, too. I shouldn't object, if you charge a small fee for this recipe, provided you divide with me.

Please tell me how it works when you try it. The editor of the FARMER would like you to make your success known, as he delights in publishing anything really practical.

When shall you sow oats, and how much to the acre?

Ans. Sow just as soon as danger of freezing is over, and from two to two and a half bushels per acre. But let me ask you a question, ain't this mixing Grange matters with other things, a little? However, I will see what Major Hudson says about it—if he takes his mixed, I don't care.

W. I. N., Rice co.—Your Executive Committee certainly has the power to make contracts, etc., if you did not limit them. But I would advise you to change your By-Laws, so that all contracts made by them, should first be submitted to the Council for approval or rejection.

The New Constitution says no dealer in intoxicating liquor can become a member of our Order. Please act accordingly.

Granges that were organized in 1873, should elect new officers or re-elect the old ones.

A man cannot join a Grange legally, unless he lives nearer to it than any other, without consent of a majority of the members where he rightfully belongs.

I do not think any proceedings are legal where you suspend a person without a fair trial.

If a Deputy accepts persons in organizing a Grange belonging to another jurisdiction, after being in full knowledge of the facts is contrary to the rules of the Order, and should be reported to the Master or Executive Committee.

The initiation can be claimed by the old Grange, but let the persons stay where they are.

A. D. W., Russell co.—A Deputy cannot organize a Grange until he is officially notified by the Secretary of the State Grange, or Master of same.

Emporia.—The new law requires that Granges shall be five miles, instead of four, from other organizations.

All persons wishing information in regard to their appointment as Deputies, must write to the Master of the State Grange, as the Executive Committee have no jurisdiction in the matter. This answers five or six letters asking the same questions.

Clay co.—One-half of the jurisdiction belongs to you, if it is ten miles, until another Grange is organized.

H. D., Brown co.—I do not think a person has any right to join our Order unless they are farming, and the only bank they should be president of should be a bank of dirt. But a man that is part miller and part farmer would not be objectionable, especially if he is a good fellow and the farm part predominates.

J. G., Shawnee co., March 14.—O. H. Kelley reports 1096 Subordinate Granges in Kansas. We have but 22 in this county. We have aimed to have a good strong membership in each Grange, rather than excel in the number of Granges. We think it much better to have one good Grange than two or three weak ones, and would advise you to unite with other Granges rather than to organize another.

For the Kansas Farmer.

DISCUSSION ON TAXATION.—Concluded.

BY JOHN DAVIS.

The FARMER of March 12th contains another paper on taxation by Mr. P. G. Lowe. He thinks the discussion should end. It is not material to me. I wrote my first paper in compliance with a written request of the editor of the FARMER, for an article for his first weekly issue. My second, because verbally requested to reply to Mr. Lowe. I did not ask Mr. Lowe to interfere in the matter. I shall not ask him to desist. He must be guided entirely by his own discretion and quit when he feels that he has had enough. I only claim the rights of common courtesy; viz, to be allowed to conclude the discussion which I opened.

Mr. Lowe complains that I did not follow and reply to his papers in detail. He is right. A large share of these papers were very personal, to such stuff I seldom reply. The remainder was absurd figuring, which needed no reply before intelligent men like the readers of the FARMER. Hence, finding my positions all safe as far as occupied, I took occasion as leader in the discussion to push still further ahead the general argument.

I now propose to answer Mr. Lowe's last paper—I hope to hang about it so closely, on front, rear and flanks, that he will have no occasion to think, I have "gone to Europe." He opens, as usual, with a personal insinuation of office hunting. I suppose that "out of the abundance of the heart the mouth speaketh." Those who never do any public act except for personal aggrandizement, can appreciate no other motive in others.

He claims that I pay no attention to local evils. And, yet, my recommendation that direct taxes be made payable semi-annually, has been adopted by the legislature. If Mr. Lowe will read my first paper he will find it devoted to direct taxation, which is local in this country.

Mr. Lowe says that he has neither "the time or ability to discuss national politics." He should have used the term "taxation" not "politics."

He claims, however, to be interested in his "inability to support his family and pay taxes on his farm in Kansas."

Now is it not passing strange that Mr. Lowe can see no connection between our unequal system of national taxation for revenue purposes, and these local troubles of his? Direct taxation for local purposes is openly levied, *pro rata*, on all the taxable property of a given state or district. All men plainly perceive it in all its details. It is plainly written on the assessor's and collector's books and finally comes to us on the tax receipts. Surely the man would be a fool who should not discover the evils and burdens of direct taxation the moment they appear. Some of the remedies for these evils are also plain; viz, rigid economy in local expenditures, and close attention to the administration of local affairs. Now, as I understand the matter, these are all proper subjects of discussion in the FARMER, but more especially in the local papers; and Mr. Lowe takes upon himself needless responsibility, when he says I pay no attention to these matters. I shall yet show that he does not read the local papers where I live, and hence knows nothing of which he speaks.

In an able journal, like the KANSAS FARMER with a wide circulation in many states, the subject of national taxation is certainly appropriate. And, I now propose to show that it is at once the most general, and also the most local and searching, of all systems ever invented by man. It has a positive, close, and direct connection with Mr. Lowe's "inability to support his family and pay taxes on his farm in Kansas." He should therefore, take up this subject of national taxation and study it closely, if he really is a true farmer, as he claims, it would be better.

Direct taxation operates openly and only on property. There is even much property exempt from its operation, and thousands of poor

men are entirely exempt from the direct operation of local taxation.

It is not the case under our system of national taxation. It seeks its victims in every condition of life. To avoid its burdens one must neither wear a garment or eat a loaf of bread. It pursues the poorest laborer to his hovel, and like the moth, the mould, or grangrene eats away his substance in a thousand ways. It is heard in the hoarse clatter of his boots on the board floor, raising the price of both floor and boots. It fumes up in his cup of tea or coffee, until he is unable to afford either. It steals the shoes and garments from his children until they are thrown as paupers on the town, and thus increases, in this and other ways, the burdens of direct local taxation.

(Concluded next week.)

For the Kansas Farmer.

FENCES OR NO FENCES.

BY WM. HOLSINGER.

In this essay I will give some of my reasons why we should not fence our farm land; and in order to introduce the subject I will begin by getting at an approximate cost of the different kinds of fences built in Kansas:

The common worm rail fence, nine rails high, staked and double ridged, will cost from 75 cents to \$1.00 per rod.

Post and rails (tight) from \$1.25 to \$1.50 per rod; post and board, five planks high, cost from \$1.00 to \$1.50 per rod; Osage Orange hedge, from 75 cents to \$1.00 per rod; stone wall, from \$2.00 to \$4.00 per rod.

I will make an estimate of the cost of different sized fields and the cost of the different kinds of fences made:

Thirty rods square contain about 5½ acres, and is 120 rods—¾ of a mile—around.

Forty rods square contain ten acres, 160 rods, or one-half mile around.

Sixty rods square contain 22½ acres, 240 rods, or three-fourths of a mile around.

Eighty rods square contain 40 acres, 320 rods, or one mile around.

An eighty acre lot is 160 rods, making 480 rods, or one and one-half miles around.

One hundred and sixty acres is 640 rods; or two miles around.

Hence, at the above estimate, I make the following table, so that the cost of each sized field will be, whichever kind of fence it may be enclosed with:

NO. ACRES.	LENGTH SIDES.	LENGTH FENCE.	75c RAIL.	1.25 P. & R.	1.50 P. & B.	2.00 O. O.	4.00 S. W.
5½	30x30	120	\$90	\$150	\$180	\$240	\$480
10	40x40	160	\$120	\$200	\$240	\$320	\$640
22½	60x60	240	\$180	\$300	\$360	\$480	\$960
40	80x80	320	\$240	\$400	\$480	\$640	\$1280
60	80x160	480	\$360	\$600	\$720	\$960	\$1920
160	160x160	640	\$480	\$800	\$960	\$1280	\$2560

The cost per acre, for five acres is from about \$16.00 to \$87.00 per acre, while it is only from \$3.00 to \$16.00 per acre for 160 acres.

A township is six miles square, and has 36 sections, 144 quarter sections, or 576 40 acre lots.

Now, assuming that there are as much as every alternate 40 acre lot fenced in a township, then we have 278 miles of fence; and I have shown that the cost of a mile of fence is from \$248.00 to \$480.00 (this does not include the cost of stone fence, but only common lumber fences as seen in the above table varying from 75 cents to \$1.50 per rod.) Hence, there will be \$69,120.00 invested in fences in one township, at the rate of 75 cents per rod.

I will now make a comparison between the cost (or value) of the fences and the value of the live stock in the township. I will assume that there is a span of horses for each 40 acres fenced, 576 head of horses at \$60.00 each will be \$34,560; four head of cattle to each farm will be 1,152 head, valued at \$15 per head, \$17,280; ten hogs to each farm, 2,880, worth \$5 per head, \$14,400; and 1,000 sheep, at \$3 each, \$3,000. The total value is \$69,240. In this comparison we see that the cost of fences is but a few dollars less than the value of the stock fenced out, and doubtless if the fences in our township were measured and the real cost ascertained, a true cash valuation obtained of all the live stock owned in the township the value of fencing would considerably more than balance the worth of the stock.

From the above we see then, the amount the farmers are compelled to pay in money and labor to protect themselves from their neighbors' stock; and I have already shown that the relative expense is much greater on the poor man than on those of larger possessions, since if we take any given sized field and double the sides each way we enclose four times as much land, hence, the larger the enclosure the less the cost per acre.

But, again, in fencing we must of necessity waste considerable land. I am not assuming too much when I say that every mile of fence wastes one acre of ground. Hence, there will be 288 acres of ground worse than wasted, as it is a place to harbor vermin and propagate obnoxious weeds, etc.

Again, if our fences would last a man's lifetime when they are built it might do, but such is not the fact, but there is a continual wearing out and breaking down of fences so that we may safely add 20 per cent annually, in repairing and rebuilding. Hence, a tax of about \$15,000 in money and labor every year.

Now, if the farmers of Kansas would adopt the open farm system and compel every one to take care of his own stock, whether horse, cow, hog or sheep.

The material generally used in fencing in Kansas, is wood, and this is scarce in many

parts of the state, and hence, is taking considerable money out of the state that could be here for other and more necessary improvements.

Having more particularly confined my estimates to a single township, I now will take a mere extended view. Our state is peculiarly adapted to agricultural purposes and the estimated population of Kansas is over 600,000; and if it would be an advantage to one timbered township to adopt the open farm system it will be proportionally greater to the state at large. If there are 238 farms in one township and a family to each, there would be 1,440 inhabitants or 288 farms, and if 600,000 inhabitants in the state and three-fourths engaged in farming, then there would be 450,000 people in the state settled on farms, or 90,000 farmers on 90,000 farms, and if we make the same estimate of 40 acres to the farm, then we have 90,000 miles of fence, at a cost of from \$20,000,000 to \$25,000,000 to the state.

We should encourage immigration into the state as much as possible and give those coming in among us a chance to improve their homesteads as fast as possible. If a man will settle on a raw prairie in the spring of the year and can go right to work to break up the ground, he may nearly raise all his living off his own land, but if he has to first build fences he cannot do much else the first year, and if he has not got considerable money he will see very hard times before he makes his farm self-supporting; it really seems unjust that all my neighbors should be compelled to fence out my stock, this is what the present system is compelling the community to do.

In conclusion, I yet say that our (Wyandotte) county is a small county and has been well timbered, but at the present rate of clearing or cutting timber, we will soon have no more than those living on the prairies; and as it is necessary and right that our laws should be general, then it is time we set the ball in motion.

I hope that even those to whom the fencing system might be advantageous will yet waive their slight objections (for they are only slight and imaginary) in order to benefit the many and those with limited means who desire to settle in our young state. I would like to see Kansas lead in this matter and show to the world that we are a progressive, liberal and prosperous people.

Rosedale, Wyandotte co., Kan., Feb. 9, 1874.

For the Kansas Farmer.]

A GOOD AND CHEAP ROOF.

The question is often asked what is the large tall slough grass good for? We answer, for roofs and shelter for stock and the protection of grain and hay.

We have put on the present winter fifteen squares at a cost of less than one-third of that of a shingle roof. The Swedish mode of construction, (having Sweede in my employ) is by putting in 1x2 strips 12 inches apart, the lower corners rounded, (poles will answer, putting the round down,) commencing at the eve putting the grass as thick as desired, then laying a stick on top of the grass immediately over the under strip or pole, then passing the willow (which requires preparation before using, by twisting in order to toughen them and pointing at their ends so as to readily pass through the straw or grass) through grass around the lower lath or pole over the top stick, drawing firmly together and fastening. These willows are put about fifteen inches apart. Second layer perfectly over the sticks, about one foot, and so on until finished; then with a good sharp knife and rake the surface is cut and raked perfectly smooth. A pole or 2x4 with ropes fastened at the top of the rafters is used by the workman to support himself, rolling up the support as he progresses up the roof, unrolls as he comes down. No. 14 twine may be used in absence of willow.

Many thousand head of cattle might thus be spared their lives with a proper application of this unused and valuable material; thousands of bushels of grain might also be saved from damaging rates to the producer. In many sections of the state this material is found in sufficient quantities to shelter all the stock and products.

E. P. DIEHL.

Olathe, Kan., March 16th, 1874.

SOVEREIGNS OF INDUSTRY.

Topeka Council No. 1 of the above named Order met at Odd Fellows Hall last Friday evening. This being the first meeting of said council since its organization there was no very important work before it. A large number of applications for membership were presented and favorably acted upon, but the initiation of those whose names were presented was postponed until Friday evening, March 20th, at which time a meeting for that purpose will be held at Odd Fellows Hall. From our stand point, the council is destined to become in a very short time as popular among the city cousins (mechanics, working men and women) of the Patrons as the grange is with the country cousins (Farmers &c.) of the Sovereigns. Its social intercourse and co-operation are good and pleasant things for men and women on the farm; they must also be good and pleasant things for men and women in the shops and factories. It is hardly two months since the organization of the first council of the Sovereigns of Industry, and yet in this short period of time councils have been established in ten States of the Union.

Like the order of the Patrons of Husbandry, its objects are to cheapen the necessities of life by bringing the producer and consumer together; to promote intimate social intercourse among people engaged in like pursuits having

a common interest; in short to benefit the working classes in mind, heart, and pocket. It uses secrecy as an additional safe guard against the intrusion of those who are unfriendly whose interests are not identical with those of the working men and women. It is non-political but it aims to make the individual sovereign a better citizen and more intelligent voter by stimulating him to habits of thinking for himself and by impressing upon him the fact that integrity, honesty, humanity, religion and country should be more highly esteemed by him than party.

Monthly Reports.

"The department monthly report of condition of crops, etc., of which there are twenty-five thousands copies printed," who get them? I have written many letters to the department for them during the last year and have received three numbers, and I hear of none of my neighbors so highly favored as that. Who gets them?

By a vigorous use of the pen I succeeded in getting a copy of the annual reports of department for '71, but nothing since. What becomes of the two hundred and fifty-five thousand copies printed? Each M. C., is entitled to six hundred.

Now, Mr. Editor, I think I would make a good use of them—can you tell me how to get hold of an occasional volume without so much begging.

KAW HILLS.

For the Kansas Farmer.

HINTS ON TIMBER.

Very many times since the removal of the FARMER and its more frequent appearance in an enlarged and greatly improved style, I have threatened this infliction, but so far and as often have desisted, from fear of interrupting and crowding out something of the excellent and fruitful matter which its now perfect form contains; and let me say now, here and forever, if any "croaking," or any species of fault-finding about size, dress, manner or matter, is hinted by friend or fiend, there can be no hope for vindication—save, perhaps, in the U. S. Senate, and that great national whitewashing establishment is so constantly pressed with candidates that the chance for purgatorial punishment at least would be ninety-nine per cent against. So it is plain that no "risks" will be taken.

Speaking of manner, or style, perhaps one will do as well as the other, if it were possible under the severe pressure that inevitably comes upon your editor and manager during the crisis of changing, to give forth more under the style Editorial, it might, perhaps, be more pleasing to those who frequently discuss a paper after a skinning of the one page, and generally less. But as it is, with family un-moved and sick, and the scarcity of mechanical help, together with your vigorous and unequalled corps of contributors, no reader with any claim to reason and propriety can fail to feel truly grateful and more than paid.

But my present purpose is not to paint that which already is so prominent, but to give a few hints on timber, and the proper time to cut for fencing purposes. One man suggests the cutting in the old of the moon; another says in the month of February; another, when the sap is up; and still another, when you are ready, like marketing your corn or your beef. My own opinion is that much depends upon the treatment after cutting, as also, the time and season.

A shell-bark hickory cut in the winter and put into fence will not last scarce long enough to season into good fuel; whereas if cut in June, when in vigorous growth, and the bark removed, it makes a paying fence. Again, if a burr oak is cut when the sap is in full flow, and trimmed and left lying it will soon rot, but if left with the limbs and leaves on it will season and become hard and tough. This may be true of other varieties—I do not know. Observers disagree somewhat in regard to utility of green and seasoned timber for posts—some claiming that green is preferable and others defending the dry. I think a large majority have favored the green, and there seems to be reason for it.

In wet ground posts last longer than on dry spots; and where wood is fairly immersed it does not decay. At least a generation of time has no perceptible effect upon it. So, if the post be planted while the pores are filled, I think it will last much longer, as then the water cannot enter at a wet nor the air at a dry time and cause rot.

But there is small use to discuss the wood fence question in Kansas. The hedge and wire kinds being so cheap comparatively, and so readily obtained, it seems a waste of time to speak of anything else. Of course the wire would need some posts and for these the very best should be provided. But for all border fences, looks and economy dictate the hedge—the Osage—kept well trimmed. Thin frequently, both for the purpose of preventing too much shade and for the purpose of rendering the work of trimming light and easy.

Any one familiar with labor and figures can soon cypher the difference between a good rail fence and the hedge, or wire; and by counting the interest he will, if prudent, abandon the wood at once and forever.

In starting the hedge be careful, always, to bank the ground high up, where given to wet at seasons, and with reasonable care you will always succeed. And without thus banking you will surely fail. The tree needs and must have a dry footing, is the idea. Yours, in the cause of economy of time and material—Kansas' only hope,

E. K. S.

Sycamore Spring, Bucks co., Pa.

The Kansas Farmer.

J. K. HUDSON, Editor & Proprietor, Topeka, Kan.

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DR. JOHN A. WARDER, Ohio.
GEO. T. ANTHONY, Leavenworth, Kan.
DR. CHARLES REYNOLDS, Fort Riley, Kan.
S. T. KELLEY, Hutchinson, Kan.
MRS. CORA M. DOWNS, Wyandotte, Kan.
"JUNEBERRY," Wyandotte County.
MRS. M. B. BEERS, Shawnee County.
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"KAMBLER."
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DR. A. G. CHASE, Leavenworth.
JOHN DAVIS, Davis county.
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NOAH CAMERON, Lawrence, Kan.
C. W. JOHNSON, Haverhill, Kan.
"OLD CENTRE," "COUNTRY LAD," "HOOSIER GIRL," W. P. POPENOE, ALFRED GRAY, PAUL SNOW, PAUL KEDDIE, PAUL MUDGE, and host of other valuable contributors, who will assist in giving the farmers of Kansas a paper not equalled in the country for originality and merit.
A special and interesting department of the paper will be the short letters from farmers and breeders, fruit-growers and others interested in the various branches of agriculture. The live discussions upon the topics of the day, embracing full and complete information upon every phase of the farmers' movement, will also be a prominent feature of the paper. Specimen copies will be sent free to any address.

THE FARMER RISES TO EXPLAIN.

The KANSAS FARMER is a large and valuable agricultural paper. That now since the *Vox Populi* went down, endeavors to be the organ of the Anti-Monopolists of Kansas. That paper would make more of a success of the enterprise if it would publish more matter telling the people what ails them, and what the remedies are for their ailments. The policy of telling its readers in every issue some state remedies for preventing chickens from dying with the gapes, where to get the best catnip to treat the cats, or how to destroy vermin on a cucumber leaf, or what is the best remedy to relieve lambs from stomach-ache, is all very well; but would it not be better, or at least as well, occasionally to tell their readers through what monopoly machinery they are swindled out of about all the fruits of their labors; how they are made the slaves of wood and drawers of water for Wall Street sharks and shavers?

This purring around and telling the farmers where they can save pennies and keep them in ignorance of how they are robbed of dollars we must confess seems to us a short-sighted and a feeble business. What the farmers want to know is, who is robbing them, and how to stop it.—*Industrial Age*.

How can you expect a man to tell the farmers what ails them who only last fall ran for the legislature as a candidate on an old party ticket and was beaten by a Granger, and don't yet know what ails himself?—*Spirit of Kansas*.

The KANSAS FARMER, we desire to say, for the benefit of our Illinois friend who travels out of his way to say an ill-natured thing, is an agricultural and family paper and makes no claim to being a political one. At the same time a full, free and fair discussion of all the live issues of the day is to be found in the FARMER every week, written with as much independence and vigor as has characterized the above journals. We do not forget that the every day duties of the farm, orchard and shop require attention to-day, and as long as the readers of the FARMER are satisfied with our labors, we shall give but little heed to the croaking of those who seem to have forgotten how to mind their own business. When we are in need of the advice of the *Industrial Age* we will make it known. Until then it is requested to begin with its charity at home.

In regard to the false as well as ungenerous comment of our neighbor, whose little political "organ" grinding it has not been our intention to interfere with, at least since the meeting of the State Grange, we have only to say, that it was true that we received the almost unanimous nomination of a republican convention, which was very largely composed of Patrons and farmers. Mr. Haff who was elected was the nominee of the straight democratic convention, and was not a Granger when nominated nor is he one to day, we believe. Against Mr. Haff we have not a word to say, he was a faithful and an efficient member. Did the *Spirit* intentionally misstate the facts? For its sake we hope not.

The editor of the *Spirit* is a professional politician, and while he has a right to be such, we do protest against this continual effort to shape the Grange into a political machine. As he is not a member of the Grange, we have not the right to say that he is violating the express teachings of the Order, but we most emphatically deny his right to speak for this great movement, and give it a political signification. The FARMER has labored to prove that the Grange in itself was not political, and if the editor of the *Spirit* was a member he would most certainly more thoroughly understand this.

What ails the editor of the political "organ" is the ever present, consuming desire for office. He has been a standing candidate ever since we came to Kansas, some thirteen years since. He was elected United States Senator once, under the auspices of Mr. Perry Fuller, we believe. Each year with its new political contests, brings him to the surface as a candidate. During the last senatorial campaign, this champion of the political "organ" did not get a very flattering Grange vote, for Senator, although the *Spirit* had promised him otherwise. Whether as a politician he will succeed in making the

Grange give him a political office, remains to be seen.

The *Spirit* is a hybrid, being a cross between a shadow of the *Vox Populi* and an agricultural column of a patent outside. It thought it was the organ for the Grange in Kansas, but the almost unanimous vote of the late State Grange decided that it did not want an organ grinder. The KANSAS FARMER has been first and last, opposed to the organ grinding business, and possibly has had something to do with removing this humbug business. *This is what ails Ross*.

A CHAT WITH THE READERS OF THE FARMER.

The interest and value of an agricultural paper depends to a great extent upon the practical papers contributed by the readers. It has been our aim as much as possible, to make the FARMER a picture of every day life, an encyclopedia of the experience of the farmers of the various parts of the state. The paper is not in any sense a local one, but belongs as much to one county as another—it is in fact the people's paper. Through it they may discuss the public and political measures of importance and interest, and also the practical details of their business. Whether they are breeding horses, cattle, swine, sheep, or growing fruit, grain, vegetables or grass, all will find their interests here represented. Some who grow fruit may think too much space is given to the discussion of subjects they are not directly interested in, while they who are breeding stock, especially desire to see that interest more prominent. The mothers and daughters write they want more for their department. A wide range of subjects have to be treated, and a great variety of tastes to be remembered.

Each week as we make up the FARMER, we wish for more room to give a larger and better paper. Our ambition is to more than fill the expectations of our thousands of readers. We started out to say to our friends what we wanted of them to assist us in this work. It is this, we want those who have raised the following crops in Kansas to tell us in direct plain English without theorizing, just how they did it, viz: HEMP, COTTON, TOBACCO, BROOM CORN, CASTOR BEANS and FLAX.

There are thousands who can give their experience in Mass., Penn., Ohio, Kentucky and Illinois and other States but what we want is how these were grown in Kansas. Tell us, to begin with, your kinds of seed, how your ground was prepared, what kind of soil, location, planting, sowing, cultivation, harvesting, the yield per acre and how, when and where you sold your crop. We want practical papers of this kind from every county in the state. Don't be afraid to put down the plain truth. We are not publishing exaggerations to secure immigration. There is is enough in Kansas in her productive soils, and many resources to satisfy reasonable men and high colored or exaggerated reports are not necessary for those who are now here or those yet to come.

There are thousands of strangers coming to Kansas every year, as well as old settlers who are interested in their special crops. We invite papers of this kind on our staple crops also. The story of how you failed to grow a certain crop, is just as valuable to the individual who wishes to grow that crop, as the history of a success. What we want is the truthful record of farming in Kansas. We are after the business in farming, and this paper will receive thankfully any practical additions to help men to do in the best and most economical manner the labor pertaining to their farm. If you reader, know of some neighbor who will give us the help on any of the subjects mentioned, ask him to do it for the claim others have upon him.

PLANT TREES.

If you have only a lot, plant trees, if you have a farm without timber, the sooner the artificial forest is begun the better. Plant them for shade, plant them for use, plant them for their beauty and ornament. Homes without trees, farms without wind breaks, orchards or groves are to be found only too frequent on our prairies, and they are bare and barren looking places. Trees are not expensive nor are groves difficult to grow, the great trouble lies in finding time to get this work done. The best season for planting is in the spring, a time when the farm work pushes in all directions, but notwithstanding, we know there comes a half day now and then, when it can be done, times when the ground is too wet to plow, that will do to set trees. If you have no trees around your dwelling don't allow this spring to pass without putting out a few at least of that most beautiful of all our shade trees, the elm, easily procured and will grow with half a chance. Cottonwoods make quick, rapid growth

for a wind break. Nothing can take the place of trees about a home. Everybody who wants fruit, of course, will plant an orchard, but what we are talking of particularly is shade trees. Nothing does so much towards making a cabin look like home as shade trees. Find time to plant a few trees every year.

SUSTAIN YOUR ORGANIZATIONS.

Do not forget in the hurry and labor of your spring and summer work, that your Grange and Club have claims upon your time. A Saturday afternoon spent with your family attending the Grange, meeting your neighbor, where mentally and socially you may receive new stimulus, will help. Besides this the business saving of the Grange, through their plans of co-operation, are worth more than all the Grange has ever cost. We know full well how hard it is during the time for planting, cultivating and harvesting of crops, for men to feel as if was possible to spare an hour away from work. This is just what is the matter with us. We have by this neglect and constant hard work, allowed our affairs to almost pass out of our hands. We have worked so constantly, neglected not only our social relations, but the business and our economical management of our interests, that many men now consider it presumption for farmers to meet together for such purposes. We have worked too much. Let us meet and reason together oftener. Let families living neighbors become acquainted, and the young folks taught that farm life may be as social and cheerful as any other. Let the Grange meeting and feast be remembered.

TO THE SECRETARIES OF GRANGES IN KANSAS.

A full and correct list of all the organized Granges in our state is very much needed. None yet published are either complete or reliable, and to fill this want, we earnestly request Secretaries and deputies throughout the state to write us immediately, by postal card or letter, the name and number of their Grange; name and post-office address of the Secretary, Secretaries of County Granges, or Deputies who will take the time to forward us a list of Granges in their county, for the benefit it may be in facilitating the correct business of the Grange, will be forwarded a copy of the Patrons Hand-Book.

Secretaries of Granges ordering a copy of the Patrons Hand-Book, at 25 cents per copy, for their Grange, will be forwarded a sample set of the KANSAS FARMER Series of Blanks, Cards, Letter-Heads and Envelopes—the most complete, systematic and beautiful styles ever presented to the Granges.

JEWELS FOR GRANGES.

The prices asked for jewels for Granges is an extortionate swindle. An eastern firm through its circulars and references endeavors to convey the impression that they are specially empowered by the National Grange, to make these sets of jewels and Grange pins, for which they ask about twice as much as they are worth. This whole business of monopolizing printing, making of jewels, furnishing of seals, etc. etc., under any official authority is a humbug, and a fraud. Nobody has power to control or direct anything of the kind. We shall resist any attempt to take money from the state, for that which can be furnished in the state of as good a quality and for less money, and we shall oppose any attempts on the part of any body to be an official jeweler, bootmaker or organ grinder. Officers of the Grange should be the last men to lend themselves and their names to building up private and personal interests.

We want to see this great movement permanently succeed, and we shall do what lies in our power to protect the masses which comprise it from being imposed upon from without or from selfish greed that may find a foothold within. The business of the Grange as we understand it, is to foster and build up home interests, to break down by co-operation, unjust and grinding monopolies, and we shall examine with care all enterprises which endeavor to secure official sanction and favor to give them success.

NOTES AND QUERIES.

Mr. O. W. Way in forwarding a club of 25 to the FARMER says, about half the winter wheat looks well, the remainder is partially frozen. Quite a number of cattle are dying in his county.

A correspondent from Howard County, Kansas, says, they want a general country store located at their town.

Mr. J. S. Lewis, writing from McPherson county, says, times are hard, but prospects for early sown wheat are good, and that the indications are that they will have an early spring.

General News.

THE SENATE COMMITTEE OF FINANCE.

Held a special meeting the 21st, at which the committee promised that the financial measures agreed upon will be reported to the senate next Monday. The bill will fix the amount of greenback circulation at \$382,000,000, thus legalizing the reissue of that portion of the \$44,000,000 of legal tender reserve which is now outstanding and making it a part of the total circulation. The total amount that has been reissued and which is now outstanding is something over \$25,000,000. The bill will also authorize free banking or National Banking system, but will require that the legal tender notes shall be retired from circulation as the new National bank notes are issued. This latter provision is regarded as a measure of contraction, but the preceding authorization for keeping in circulation \$26,000,000 legal tenders that have been reissued from the reserve is considered a substantial victory for the advocates of an increased volume of currency, who, it is understood, will claim in the senate that the principle having been in the United States as regards a portion of the \$44,000,000 reserve the whole should be placed in circulation.

FIRE IN ST. LOUIS.

The Industrial Plow Works of Hopegood & Co., burned on the 21st, loss on building \$10,000 and on machinery \$50,000. The insurance cannot be ascertained up to date. The machine shops of the Atlantic and Pacific railroad company burned on the same night.

THE STRIKE.

The Erie railroad company endeavored to supply the places of the strikers at the freight depots by employing Italians and Germans, but only with partial success. A gang of 150 of the former were marched early in the morning to pier 31 and left standing on the sidewalk. While arrangements were making to put them to work on the dock some of the strikers came along and the Italians scattered in all directions. Two hundred Germans who soon afterwards arrived, went to work. The strikers hang about the companies docks in Jersey city saying "30 cents an hour or no work." The movement of freight is at a stand still there. The freight which accumulated at the New York dock has been overhauled and the perishable articles forwarded by the way of Piermont.

Over 1,000 laborers employed on the new railroad tunnel at Bergen Hill struck today for an advance from \$1.50 to \$1.75 a day.

DR. J. G. HOLLAND.

Has published a reply to a recent circular of Archbishop Purcell on the present temperance movement among the women. He says: "What in God's dear name was there left them to do but what they are doing, and what you condemn. The whole business has been left to good women, and the latter are praying in the churches and in the streets pushing on the divine and peaceful crusade. Because the men of America have failed to do their duty shall a Christian man in high station lift up his voice against the women?" In a concluding paragraph of the reply of Dr. Holland says to the Archbishop: "I tremble to think of the stumbling block which you, in your circular, have placed before the tempted and deceived. There is not a whisky mill in the Union which does not stand firmer on its foundation in consequence of it."

There is not a whisky seller in the country who does not approve of it, and feel easy in his business because of it. There is no clergyman who indulges in wine to the destruction of his influence as a temperance man, who does not see in it his justification. There is no young man just beginning a course of dissipation, who does not find his downward steps the easier for it. All those who respect and revere the temperate practice of your life are guided by it. You have made a mistake which you can hardly rectify in a lifetime. You have given strength to the forces organized against the National purity and morality."

THE ASHANTEE WAR.

The Ashantees king finally surrendered himself into the hands of the British troops, and was a prisoner at General Wolseley's headquarters. Despatches from Calcutta report that the distress among the famine stricken people in Eastern Tihoot is increasing.

In one village alone eighteen persons have starved to death within the past four days. The probability of war with the Argentine States, on account of the new insurrection in Paraguay, was increasing, and there was a general decline of vessels in consequence. Brazilian troops and vessels were going forward to Paraguay.

BUENOS AYERS DEEPLY EXCITED.

At Buenos Ayres the elections were in progress and were attended with intense excitement.

Troops were being despatched to various points on the frontier, and war with Brazil was looked upon as liable to break out at any moment.

THE CHOLERA.

continued to rage, and the deaths from the deaths averaged seven daily.

PATRON'S HAND BOOK—TABLE OF CONTENTS.

1. Introductory—Character of the Farmers' Movement.
2. History of the National Grange.
3. Declaration of Purposes of the National Grange.
4. Constitution of the National Grange.
5. By-Laws of the National Grange.
6. History of the Kansas State Grange.
7. Address of the Master, M. E. Hudson, at the meeting of the State Grange, February 18th, 1874.
8. Constitution of the State Grange.
9. By-Laws of the State Grange.
10. Decisions of Master Hudson, at the State Grange.
11. How to proceed to Organize a Grange, by W. P. Popenoe, member of the State Executive Committee.
12. Our Business Agencies, by John G. Otis, State Agent.
13. Recommended Constitution for County Granges.
14. Recommended Constitution for Subordinate Granges.
15. Manual of Practice for Granges, as recommended by the Executive Committee of the State Grange.
16. Parliamentary rules and usages as given by Cushing, for the conduct of deliberative bodies.
17. A full and correct list of all Granges organized up to date of publication of this work, giving name and number of Grange, name of Secretary and Post-Office address.
18. List of Delegates attending State Grange at Topeka, 1874.
19. Calendar for 1874.
- Price, mailed to any address, post paid, single copies, 25 cents; 1 dozen, \$3.00; 2 dozen, \$5.00; per 100, \$20.00; 500, \$75.00. Address, J. K. HUDSON, Editor KANSAS FARMER, Topeka, Kansas.

Meteorology.

TEMPERATURE OF FEBRUARY.

We take the following summary of Temperature for February from the Monthly Weather Review issued from the office of the chief signal officer at Washington.

The temperature during this month has been about the average of many years past, the most decided departure being in Minnesota, Wyoming and Colorado. On the 24th, in the latter Territories, the thermometer indicated the lowest temperature ever recorded there, it being—24° at Cheyenne,—17° at Colorado Springs,—0 at Denver and 0 at Santa Fe.

The isothermal lines for the month are given on Map No. 2. In drawing these, some use has been made of the observations made by the crops of voluntary observations reported to the Signal Office.

The southeastern side of a region of cold air and high barometer, generally presents cases of extreme contrasts of temperature, and such have been quite frequent during this month. The most remarkable instances was noted on the afternoon of February 23d, and it is worthy of special attention, since similar cases have occurred but three or four times during the last three years. On the date in question a line drawn northward through Louisiana to Vicksburg, thence northeast to Baltimore and thence southeast to the Atlantic coast, separated the area of cold northeast winds and rain on the northward from that of warm southwest winds to the southward. This belt of great thermal contrasts had existed on the 20th, and extended slowly eastward until the 23d.

The greatest contrast recorded is found in the Middle Atlantic States, although probably parallel cases occurred at other places, where the Signal Office has no stations. At New York the temperature of 41°, with northeast winds is first recorded on the 21st at 7.35 A. M., and continued uniformly until the 23d 7.35 A. M. At Philadelphia there were northeast winds, temperature 44° on the 22d 7.35 A. M., and continuing uniformly until the 23d 7.35 A. M.; at Baltimore, northeast winds, temperature 58° on the 22d 11 P. M., this is the only northeast wind reported at Baltimore. During the three days in question Baltimore, as also always Washington, experienced only warm southwest winds.

RIVERS.

The Missouri river at the end of the month was at about the same height as at the beginning, both at Leavenworth and at St. Louis, having in the interval risen and again fallen from one to three feet. The Ohio fell, with but slight interruption, until the 18th of the month, when a sudden rise of about eight feet occurred in the upper portion of the river, producing by the 20th a rise of fifteen feet at Cincinnati. The extensive rain of the 23d and 24th, throughout the Ohio valley, caused a very general rise, which was especially marked at Nashville. At the close of the month the river stood at Cincinnati, Louisville and Cairo from eight to twelve feet above its position at the middle of the month. The Upper Mississippi has varied but slightly, and at the close of the month averaged about one foot lower than at the beginning; below St. Louis it has varied considerably, and at Cairo, Memphis and Vicksburg closed from four to six feet higher than at the beginning of the month. The wave of high water, which, on the 28th, was passing Cairo and Memphis, had not at that time reached Vicksburg.

Scientific Miscellany.

NEW SAFETY LAMP.

This is a French invention, intended to remedy the great defect of the Davy lamp, namely, its feeble illuminating power. The inventor, M. Boullenoit, has constructed a lamp divided into three compartments. The lowest of these is a strong chamber designed to contain, at considerable pressure, the quantity of air needed to supply the lamp for several hours. Out of this chamber rises the wick, which is surrounded with the oil, and fitted with a suitable burner. The middle compartment is of strong glass, and may have guards to protect it against accidents. The uppermost compartment is a dome with one or more valves, which open outwards under a slight pressure; these let out the products of combustion as they are formed. The orifices by which the valves communicate with the outer air are covered with wire gauze, as a precaution against the inflow of fire-damp when the valves open.

RESTORATION OF OIL PAINTINGS.

PETTENKOFER'S method for the regeneration and restoration of oil paintings is explained as follows by F. Goppelsroder, a summary of whose papers on the subject we find in the "American Chemist." The linseed oil used by most artists contains eighty per cent. of linoleine, while the poppy contains seventy-five per cent. of that substance. This linoleine, solidified by exposure to the air, increases in weight ten per cent., giving a hard transparent mass called by Muller linolexine, which preserves the colors with which it has been used. To the pictures when finished varnish is ordinarily applied, consisting of solution of resins in turpentine or fatty and drying oils. If the varnish cracks, more is applied to fill up the pores, and several repetitions may have the effects of ruining the picture. The pictures allow moisture to condense upon them, which is evaporated; and in process of time more is condensed, the result finally being a dulling of the picture. Indeed, the author states that by wetting a varnished surface with distilled water, and evaporating the latter, wetting again, and again drying, a white spot may be readily made. Pettenkoffer restores the brightness of the picture by exposing it to the vapor of alcohol, which, by condensing on the picture, causes a solution of the film of varnish and thereby restores to the resin its uniformity. A varnish of balsam of copaiba, which dries more slowly than most others, is also found to act as a preservation. By way of preparation for the alcohol treatment, the pictures are washed first with water, to remove dust, etc., and then with turpentine, to remove the excess of the resin.

The lowest point within the Yellowstone National Park is said to be the mouth of Gardiner's river on its northern boundary line. This is 5,400 feet above the level of the sea. Yellowstone lake is 7,800 feet above the sea level.

Literary and Domestic.

EDITED BY MRS. M. W. HUDSON.

For the Kansas Farmer.

God's Ways Are Not Our Ways.

BY MRS. MABEL STRATTON BEERS.

"T was early spring-time, and the earth
Seemed full of laughter at the birth
Of tiny birds, and sweet wild flowers
Which sweeter grew as hurried showers
Came softly down, deepening the green
Of grass and cowslip, 'side the stream
That rippled on, by day and night,
Across the farm of Richard White.

Ten years of peace and quiet joy
He had passed there, and no alloy
Of pain and grief seemed there in life
For him: his children four, and wife,
Were blessed with health: the fruitful soil
Its wealth of grain gave for his toil:
But yet he sighed. "The far off West,
Of which he read, he longed to test.

And, as the days flew swiftly by,
The fever in his brain ran high.
So that, a buyer happening round,
He straightway sold him all his ground:
Then home he went, told Mary all
How he had sold, and hoped, by fall,
On Kansas's prairie they would find
A larger farm, just to their mind.

"I know, dear wife, that you will grieve
Because 'tis done, and you must leave
Friends tried and true: and this old home,
Which has so dear and precious grown.
Our boys are growing fast, you know,
And it is time for us to go
Where land is cheap, and, as they say,
"Get ahead for a rainy day."

Her love for Richard, strange to tell,
Gave her the strength to answer: "Well,
To good or ill, to well or woe,
Where thou goest I will go."

Spring's fairy beauties were faded and dead,
The harvest was ended, autumn leaves red,
And dotted with gold, and spotted with brown,
Were drifting in hollows, strewn on the ground;
While all through the forest, naked old trees
Tossed wildly their arms and moaned in the breeze
Which tasted of winter, ere Richard White
Had realized half of the visions bright
Which had lured him on to pioneer life
With his children four and his faithful wife.

The "beautiful farm" was harder to find,
With timber and water, just to his mind,
With a building spot commanding a view
Of the prairie broad, and the river too,
Than he had dreamed, but he persevered,
And bought at last. He then a cabin reared
Of logs, and of chinking, in true western style;
His brain building castles in air meanwhile,
Of fences well made, and sod overturned,
Which covered with grain, from what he had learned
Would soon yield a fortune, so he and wife
Contentedly could relinquish the strife
Of every day labor, folding their hands
In blissful repose, while life's ebbing sands
Should softly run out.

One can build in the air; and in the white sand
Which lies at our feet, with our finger trace
The form of a letter, and, with a feather,
Write a word on the wind, and, with a pen,
But one sweep of the billow over the strand,
And never a sign of the work of our hand.
So it is in life, to great and to small,
Who chases the phantom, "Perhaps," do fail.

One morning, when Richard awoke, he found
While he had been sleeping, without one sound
The form of a letter, and, with a feather,
Write a word on the wind, and, with a pen,
But one sweep of the billow over the strand,
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Who chases the phantom, "Perhaps," do fail.

The morning was warm, the sun shone bright,
The snow would be melted and gone by night.
He knew by intuition, "It will not snow long—
He said, "and have it done: "for well I know
The longer I wait the colder 'twill be;
That journey once made and I shall be free
To cuddle at home and keep up the fire."

He bustled around, and did up the chores,
Bidding his Mary to keep within doors,
Till he should return. "It will not snow long—
The weather is fine, and my horses so strong—
But here is our Roger, coaxing to go;—
Is't better, think you, we tell him 'no'!"

"Here's Phillip and Ned to bring in my wood—
I'd take the child, Richard, 'twill do him good,
Be pleasant for you, and with these three
I never a moment will lonely be."

Thus bravely the woman—but mother and wife,
Through day and night following had hard strife
To keep back the tears and smother the pain
Which with thought of her dear ones ever came.

The night came on dark, and dreary and raw,
And in the gray morning the weary one saw,
With fearful forebodings, the fast falling snow
Come whirling and leaping, filling the air,
While storm-winds were whirling like souls in
despair.

The day went at last, but the storm still stayed:
Her children were sleeping, kneeling she prayed:
"Oh, Father, my darlings I pray thee keep—
Then warn with her watching she fell asleep;
A deep, quiet sleep, without even a dream;
And woke not, till through the window a screen
Of beautiful sunlight told her the storm
Had given away to a clear, frosty morn.

Hasily rising, and thinking "To-day
My husband and Roger can start on their way,"
She raked out the coals and piled on the wood,
Enveloped her form in her cloak and hood,
Took down the tin bucket, in which to bring
Water for breakfast from the neighboring spring;
And opened the door—could it be a dream!
Or was it a fact—their own faithful team
Stood quietly helping themselves to corn: no
Sign of her husband, no sign of her boy; snow
Covered the wagon and all that it held.

An undefined dread and horror impelled
Her to rush to the wagon, throw out the snow,
With quick, rapid motion of hand, when, lo!
See wrapped in the blankets, so cozy and warm,
She found her boy, Roger, safe from all harm.
He wakened with innocent, simple surprise,
To find it was morning—rubbing his eyes
In childish endeavor to comprehend—
"Oh, now I know, mama, at Wilton's bend
Pa tucked me in tight, to keep out the cold,
And said he should walk, because he was old,
And would freeze if he rode, the wind blew so,
While the air was full of cold and snow.
I shouted once, but he could not hear,
So I went to sleep, and thought he was near."

The rest is soon told, though sad is the tale—
When spring came again, a widow pale
And stricken with grief, with four little boys,
Went home to her father, feeling all joys
Lay buried and dead, with one they had found
By the side of the road, prone on the ground.
He'd a whip in his hand, all covered with sleet,
While a snowdrift white was his winding sheet.
The prairie, alas, had proven his lie;
But angels, who hover forever near,
When souls are departing, bore above
The soul of her husband to realms of love.

For the Kansas Farmer.

A KANSAN IN EUROPE.—No. 10.

BY RAMBLER.

York is the shire town of Yorkshire county,
and is said to be the oldest city in Great Britain.
It dates back nearly a thousand years
before Christ. During the time of the Romans
it was the capital of Britain.

The ancient part of the city is still enclosed
by a battlemented wall, some twenty-five feet
in height, and forms a delightful promenade
of four miles in extent.

In our walk around the city on this wall we
arrive at the river Ouse, which flows through
from west to east. The walls here are much
thicker and heavier and are built flanking the
river. They have the appearance of having

been strongly fortified at some former period.
The river at this point is a deep, narrow
stream, navigable only for small sloops and
canal boats, in fact, it looks more like a canal
than a river.

Jumping into a wherry, we are sculled
across in a few minutes, and mounting the
wall again continue our walk.

The streets here are the narrowest we have
ever seen, in many places not being more
than twelve feet wide, paved with cobble-
stone and no curbing whatever. One would
almost imagine himself in China, if it
were not for the people, even these have a dif-
ferent look and we might say speak a different
tongue entirely from the Scotch people, their
brogue sounds peculiarly harsh to our Ameri-
can ears.

The only attraction for the tourist in this
place, apart from the quaint old city and its
inhabitants, is the cathedral. This is one of
the oldest, and is the second in point of size,
in the kingdom. It was founded by Edward,
King of Northumberland, 635, but was prin-
cipally erected in the 13th and 14th centuries.
Three distinct styles of architecture are plain-
ly visible.

Having found a tolerable good position to
get a view of the west front of the building.
We are ready to acknowledge that taste, in-
genuity and skill can produce nothing more
complete. It is about 150 feet in breadth and
something more than that in height and is
composed of two distinct styles and periods of
building. The principal portion, up to the
battlement above the cornice, was completed
about the year 1340. Above the main entrance
are several sculptured adornments, represent-
ing events connected with Adam and Eve and
Cain and Abel. On the upper portion the or-
naments are of a foliage and floral style.

This portion was erected between 1430 and
1455. The contrast between the two periods
is very striking.

The towers are splendid specimens of the
perpendicular style of building. The south
one was completed in 1455, the north one
about 1482. The tops of the finials on the
pinnacles of the towers are said to be 200 feet
from the ground.

Proceeding around to the north side of the
cathedral, we have a fine view of the north
transept and the Central or Lantern Tower.

This part of the building was commenced
about 1260 and finished in 1300. It is entire-
ly a different style of architecture from all
other parts of the cathedral. We have here
the massive Norman pillars, bold projecting
bases and acutely-pointed arches.

The ornaments are entirely of foliage, formed
in clusters and festoons.

Entering the cathedral, we are struck with
the magnificence of its interior. The lofti-
ness of the Lantern Tower is beyond descrip-
tion, supported as it is by twelve heavily rib-
bed columns of ten feet in diameter, and not
less than 100 feet in height. Above this a
massive stone cornice. The windows of the
tower cannot be less than seventy feet in
height. We are told that the height from the
floor to the roof of the Lantern Tower is 135
feet. Could Solomon's Temple have been
greater than this? How were all those tre-
mendous stones put into position without the
aid of steam power. We, of the present period,
can construct nothing equal to this with all
our modern appliances.

There are some five or six tombs in the cathe-
dral, principally those of archbishops of the
church, but are of no particular interest to the
visitor.

One thing more is worthy of mention, and
that is the east window. It displays mag-
nitude, beauty and magnificence beyond descrip-
tion. It is 77 feet in length and 32 feet in
breadth. The glass is not painted, but stained
in the process of manufacture, and is so cut
and shaded as to represent prophets, kings
and saints and events recorded in the Old Testa-
ment. An artist was brought from Rome,
who manufactured the glass near by and was
fifteen years designing and completing this
work. His salary for all this time was £80
sterling.

Humane Education.

Our schools, pulpits and press, and more es-
pecially the home, should be so many agencies
for disseminating the principles of the law of
kindness. The delicate refinement and sensitive
humanity which recognizes the hand of the
Creator as well in the tiny worm as in the won-
derful mechanism of the human frame, is in-
herent in all; but the mass must be educated
up to the point where they can recognize the
claims of every creature, however humble, to
kind treatment and protection from injury.
The boy who finds pleasure in torturing insects,
or takes delight in stoning frogs, or wantonly
robs bird's nests, never will develop into a
generous, kind-hearted man, unless restrained
by special training, and in extreme cases by
the stern hand of authority.

In England, and in Massachusetts, it has
been the practice to offer prizes for the best
compositions from the pupils in the public
schools on the subject of kindness to animals.
The result has been the display of a great deal
of ability, and more thought on the subject
than had been supposed to exist; and also a
marked change for the better in the sentiment
of the youth of both sexes, in regard to the
relation existing between themselves and the
animal world. The coming men and women
are the lads and misses of our public schools.
With proper culture and training in this direc-
tion, can anybody doubt the ennobling effect
upon the next generation, tending to soften
and humanize them in their treatment of their
dumb servants.—Cor. Manchester (N. H.) Dis-
patch.

If perennial plants have stood three years in
one place, separate the stools, replacing one,
third, and give the balance to your neighbor
who has none.

For the Kansas Farmer.

APRIL.

BY JUNE BERRY.

Hear me, April, do not linger
Loitering on thy way;
Hark! a thousand fainting voices—
Call to thee every day.

O haste thee to thy fairy task!
After the long death-night;
With dappled buds make orchards gay
Frost hedges o'er with white.

Loosen the tendrils round the eaves
Bring forth the crocus gold—
Bid the dear, delicious lilacs
Their purple plumes unfold.

The waters chafe beneath their chains
Fretting to leap again,
The bee to roam, the bird to sing
Between the sun and rain.

Have pity, O, I pray thee, April!
On pale anemones,
Just peeping out their fairy heads
To catch thy first soft breeze.

O, ye violets and primroses!
O, redbirds' thrilling strain!
O, honey bees and hyacinths!
Bring April back again!

Hark! the liquid murmur floating
Soft as reed-tuned notes,
Such as that from shepherd's pipe
O'er some lone moor may float.

Lo! April with the azure dress
She of the sunny head—
Has heard, and sprinkling daisies, comes,
With lilacs garlanded.

Up from the amber South she floats
Mid flash of brilliant dyes—
Warm, spicy wafts, gay-tinted birds
And gleam of butterflies.

"Coming!" list her sweet wind-whispers—
Dream-music is her voice;
"Come blossoms, song-birds, brooks, and all
Wake up! rejoice, rejoice!"

Big Knife Lodge, Wyandotte co., Kan.

For the Kansas Farmer.

USEFUL INFORMATION.

In looking over our part of the FARMER I
see some one wants to know several things,
one of which is how to make good yeast.

My way of making dry yeast is, I don't know
how to make wet yeast to keep, take six
medium sized potatoes, pare and cook them in
three pints of water, and a handful of loose hops
cooked in a pint basin, have the basin nearly
full. Have ready in a pan 1½ pints of
flour; when the potatoes are done pour the wa-

ter and stir it up; then mash the pota-
toes quickly and add them with the water
from the hops, which should be kept boiling
until they are needed; stir all together and it
will be as thick as you can stir it; if it should
not wet all the flour, add some more hot water,
but don't get it too thin; then let it cool, after
which add a teacupfull of good yeast well
soaked, and keep it in a warm place. In the
morning stir it down, and as it rises through
the day, then the next morning, after your work
is done, mix in all the cornmeal you possibly
can and leave it in crumbs, and place it where
it will be at least a week in drying. Don't
think it is spoilt if it smells so strong you can
smell it all over the house, it may not, but it
will be better if it did.

A good way to make bread is to take half as
many potatoes, about one fourth as much hops
and makes your yeast the same way, making
it just after dinner, this time of year, and about
dark in the summer. Stir it down in the morn-
ing and when it is light take four teacupfulls
of warm water and make a sponge, treating it
the same as any yeast bread. I have never failed
to make good bread when I give it proper
attention, but right there is the trouble, rising
bread is like raising babies; you have got to
watch it and tend it in time or neither will
be very good, indeed I think we have more
bad bread in this world because there is so
much ease to do.

Hard water can be made soft by using lye
made of wood ashes boiled, or by using the
concentrated lye, which can be procured at any
grocery. In making the lye no rule can be
given as there is such a difference in the
strength of ashes. Ashes from down, dirty
wood will scarcely ever make lye at all, and
has given rise to the opinion among some, that
water in some localities was so hard it could
not be broke, when the trouble was, the wood
was too soft.

The best way to break it up to have a barrel
and fill it with water, put in the lye and stir
it well and let it stand over night when it will
have settled, or you can break a boiler full at
a time, often as it warms skim of what rises
the hotter it is the quicker it will become clear.
If one has never used it and the ashes are strong
they had better try it in hot water first or they
may get in too much, which would be hard on
the hands and might yellow the clothes.

To knit double heels in socks, when you set
the heel widen every four stitches and when
you knit backwards slip every other stitch,
knitting all as you forward.

There, if the Editress does not think it is too
much trouble to put in the missing capitals
and punctuate this she is welcome to it. If it
is thrown away I shall not feel hurt.

JERUSAHA JONES.

Pleasant Hill, Kan.

I wish some of your numerous lady readers
would inform me through the columns of the
FARMER, the best mode of preparing salsify
or oyster plant for the table.

Mrs. C.

The proprietor of a well known silver es-
tablishment in Philadelphia says that house-
keepers ruin their silver by washing it in soap
suds, which makes it look like pewter. He
recommends soft leather and whitening to be
used.

Miscellany.

Advice to Teamsters.

WHAT CONSTITUTES A GOOD DRIVER?

First. A man who sees that good care is
taken of his horse in the stable, by being well
fed with wholesome food of cracked corn and
oats, with plenty of good hay.

Potatoes or carrots may be given once or
twice a week to good advantage.

See that he is kept clean, warm and comfort-
able, with plenty of bedding.

A piece of rock-salt should always be left in
the manger.

Second. He should see that his harness is
kept soft and clean, particularly the inside of
the collar, which ought always to be smooth,
and the perspiration, when dry, causes irritation,
and is liable to produce galls on the shoulder.

The collar should fit closely, with space
enough at the bottom to admit a man's hand.
If too large it has the bad effect of drawing the
shoulders together.

On no consideration should a team or any
workhorse be compelled to wear a martingale,
as it draws the head down and prevents him
from getting into any easy and natural posi-
tion.

The check-rein may be used, but only tight
enough to keep the head in a natural position,
and should never be wound around the hames.

See that the hames are buckled tight enough
at the top to bring the draught-irons near the
centre of the collar. If too low, it not only in-
terferes with the action of the shoulder, but
gives the collar an uneven bearing.

Caution should be taken that the girth is not
buckled too tight, particularly on string-team,
for when the traces are straightened it has the
tendency to draw the girth against the belly
and distress the horse.

Third. See that the horse is kept well shod
with a good stiff shoe, always calked at the
toe and heel on the hind feet, as it is there
where all the propelling comes from when
heavily loaded.

Keep the feet good and strong by not allow-
ing them too be cut away too much by the
blacksmith.

Fourth. The best of judgment should be
used in loading, taking into consideration the
condition of the street and the distance to be
travelled.

Never overload, for by so doing you only
distress, strain and discourage your horse, and
do him more injury than you can possibly gain
by carrying the extra load.

When your load is hard to pull, stop often,
and give your horses a chance to breathe.

No good driver will ever resort to the cruel
practice of whipping or beating his horse. A
light whip may be carried, but there is seldom
use for it. Much more can be accomplished
by kind treatment and good judgment.

Remember, the horse is a very intelligent,
proud, sensitive, noble animal, the most useful
known to man, and is deserving of the great-
est kindness.

As many horses have suffered from bad ex-
ample and inexperienced drivers, the above
advice is offered. DAVID H. BLANCHARD.

We cheerfully indorse the above advice.
Wm. Saunders, Veterinary Surgeon; Josiah
H. Stickney, Veterinary Surgeon; Theo. S.
Very, Veterinary Surgeon; Robt. Wood, Ve-
terinary Surgeon; Geo. W. Forristall, Supt.
of Health; John C. Stiles, Supt. of Union
Horse Railway; Waldo Adams, Adams Express
Company; John Trickey, Lumber Dealer;
Chas. A. Currier, Special Agent of Mass. So-
ciety P. C. A.

Condensed Table of Domestic Postage according to the new Postal Code.

Mail letters, each ¼ oz., 3 cents; Drop letters
at all offices except at letter carrier offices 1
cent; Registered letter in addition to proper
postage 8 cents; All letters on which a full rate
of postage has been paid, but on which further
postage is chargeable will be forwarded
charged with unpaid postage at the office of
delivery.

If the postage is left wholly unpaid, or less
than one full rate, it will be held for postage
and sent to the Dead Letter Office.

A letter once delivered to an authorized per-
son, cannot be mailed unless additional post-
age is paid.

Letters addressed to fictitious persons or
firms are not deliverable nor are letters simply
addressed to a post office box or to initials deliv-
erable.

Advertised letters are held four weeks after
publication and if not called for are sent to the
Dead Letter Office.

Newspapers, each 2 oz., 1 cent, Periodicals
and Magazines, 1 cent, Pamphlets, Occasional
Publications, 1 cent; Hand Bills, Posters, Sheet
Music, 1 cent, Books 2 cents; seeds, bulbs, roots,
cuttings, 2 cents, ores, minerals and metals, 2
cents, samples of merchandise, 2 cents; book-
manuscript, 1 cent; patterns, sample cards letter
envelopes, unprinted cards; &c., 2 cents; all
liquids, poisons, glass, explosive materials and
obscene books, are excluded from the mails.

All packages of seeds, roots, bulbs, cuttings
samples of merchandise, patterns, letter envel-
opes, unprinted cards, plain and ornamental
paper, are limited to *three ounces* in weight.

Packages of this class deposited in the mails
over the prescribed weight, are charged at
letter rates.

Other matter, such as newspapers, books,
magazines, posters, engravings and printed
matter generally, is limited to *four pounds* in
weight and must be fully prepaid.

VARNISH FOR WOOD CARVINGS.—The fol-
lowing is recommended for this purpose by a
foreign authority. One part of gum-shellac
is dissolved in three to four parts of alcohol of
92 per cent, mixed with one part of water, fil-
tered, pressed, and the solution distilled until
all the alcohol is evaporated. The gum which
is precipitated from this solution is dried on a
water bath and dissolved in double its weight
of alcohol of 96 to 98 per cent.

The cow must be treated kindly. You may
slight or whip her and she will spite you in the
milk-pail. The man who is passionate in his
herd never did and never can realize profit from
the dairy.

TO PREPARE HORSE RADISH.—Take a saw-
mill and grind it, after cleaning thor-
oughly, and by putting it through three or
four times, it can be made as fine as wanted.
This will be a very economical mode of pre-
paring this over the usual tedious manner of
grating it.

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White Elm, 1½ to 3 feet, " " " " " " 3 00
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Everything in proportion. Send for circular.
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Is a spring grain, and warranted to yield better and
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Bales hay faster, puts it in better shape, with less
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THE subscriber will sell at public sale at the
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about three-fourths of the "Forest Home Farm"
Herd of Short-horns, comprising 45 to 50 head,
including all the Show Animals, both bulls and
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This being the top of my herd, I think I can safely
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Sale will commence at 1 o'clock P. M.
Terms—Six months' credit on approved paper, or
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Pure Cane Seed.

VARIETIES—Liberian, Regular Sor-
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Singing Birds. Send for price list.

NEW CORN FRESH AND GENUINE

WETHERFIELD

THE STRAY LAW.

STRAYS.

ARTICLE III.
Sec. 5. No person shall take up any unbranded animal as a stray, between the first day of April and the first day of November, unless the same be found within his lawful enclosure; nor shall any person, at any time, take up any stray, unless it be found upon his premises, except as in this chapter otherwise provided.

Sec. 6. No person shall take up any horse, mule, ass, ox, bull, sheep, swine or other animal, under the provisions of this article, unless he is a citizen and householder, and enters into bonds, with sufficient sureties, to the state of Kansas, for the use of the owner, in double the value of the property proposed to be taken up, to be ascertained by the justice before whom the person wishes to post such a bond, which bond shall be filed and preserved by such justice.

Sec. 7. If any animal, liable to be taken up, shall come upon the premises of any person, and the owner of such premises fails to keep up such a bond for more than ten days after being notified of the fact, any other citizen of the same county may proceed to take up such stray, and proceed with it as if found upon his own premises.

Sec. 8. If any person take up any stray, he shall immediately advertise the same by posting up three printed or written notices, in as many public places in the township, which notices shall contain a full description of the stray.

Sec. 9. If such stray shall not be claimed and proved the explanation of ten days after it was taken up and advertised, then the taker shall go before a justice of the peace of the county and file his affidavit, stating that such stray was taken up on his premises, and that he did not drive or cause it to be driven there; or that it was taken up on the premises of some other person, naming him, and that he gave such person ten days notice, and that he has advertised such stray ten days, and that the marks or brands have not been altered since, to his knowledge.

Sec. 10. The justice shall issue a summons to three disinterested householders to appear and appraise such stray, which summons shall forthwith be served by the taker up of such stray; which service shall be without charge, if not demanded at the time of making the appraisement.

Sec. 11. The householders, or two of them, shall proceed to describe and appraise such stray, stating the sex, age, color, size, marks and brands, and value of the same, which description and appraisement they shall reduce to writing, to which they shall append their affidavits that the same is a true description, and a fair and impartial appraisement, which shall be filed by the justice, and recorded by him in a book to be kept for that purpose.

Sec. 12. The justice shall deliver to such taker-up a certified copy of the record upon his stray book, which he shall, within fifteen days after such appraisement, cause to be delivered to the county clerk.

Sec. 13. The clerk, immediately after receiving the certified copy from the justice, shall record the same in a book kept for that purpose, and whenever the appraised value of such stray or strays shall exceed ten dollars, said county clerk shall, within ten days after receiving such certified description and appraisement, unless the animal shall have been lawfully claimed by the owner, forward, by mail, a notice containing a complete description of said stray, the day at which it was taken up, its appraised value, and the name and residence of the taker up, to the Kansas Farmer, to be inserted in said notice, which sum shall be in full payment for the publication of said notice in said Kansas Farmer, in three successive numbers. The publisher of said Kansas Farmer, for a public notice, shall be liable in the same manner and to the same extent as is provided in this article in case of a failure of the county clerk, or justice of the peace, to perform the duties enjoined upon him, and shall be held liable to the publisher of the Kansas Farmer to furnish the county clerk of each county in the state a copy of said paper, to be kept on file in his office.

Sec. 14. Any person who takes up a stray, lawfully taken up by him, with care and moderation, if he does not injure or abuse it.

Sec. 15. The owners of any stray swine may, within ten days after the date of their taking up, or of any other kind of stray stock, within twelve months from the time of taking up, prove the same before some justice of the peace of the county, having first notified the taker-up, in writing, of the time and place when and where, and the justice before whom such proof shall be made, and if such justice is satisfied from the evidence that the stray belongs to the claimant, he shall, upon payment of all costs and expenses of keeping, order it to be delivered to the claimant, and shall certify to the county clerk that such stray has been proved and returned to the proper owner within twenty days from the time such proof is made.

Sec. 16. The clerk shall make an entry of the fact stated in this certificate in the margin of the county record, opposite the recorded certificate of the justice before whom such stray was appraised, which entry shall cancel all lien the county may have upon such stray.

Sec. 17. If the owner and taker-up cannot agree as to the amount of costs and expense of taking up, it shall be decided, on application of either party, by the justice of the peace before whom the proof of ownership was made, who may compel the attendance of witnesses, if necessary, and in making up his decision he shall take into consideration whatever service the taker-up may have had of such stray.

Sec. 18. If the owner of any swine, within two months, or of any other kind of stock, within twelve months, fails to comply with the provisions of this act after the time of taking up, and the taker-up shall have proceeded according to law, a complete title shall vest in the taker-up.

Sec. 19. In all cases where the title to any stray shall vest in the taker-up by the lapse of time, the taker-up shall pay into the county treasury, after canceling all costs of taking up and posting, one-half of the appraised value of such stray, to the use of the county school fund; and in default of such payment, the county shall have a lien on such stray, to secure the payment of such moneys to the county.

Sec. 20. If any person shall sell or dispose of any stray, or take the same out of this state before the title shall have vested in him, he shall forfeit and pay to the county double the value of such stray, and may also be punished by fine, not exceeding twenty dollars, and imprisonment in the county jail not to exceed thirty days.

Sec. 21. If any person unlawfully takes up any stray, and fails to comply with the provisions of this act, or uses or works such stray before advertising the same, or shall drive the same on his premises for the purpose of taking up the same, or shall keep the same out of the county more than five days at one time, before he acquires a title to it, he shall forfeit to the county not exceeding fifty dollars.

Sec. 22. The county commissioners of the several counties of the state, at their next regular session, or at any subsequent session, shall examine the certificates or other records of strays filed in the offices of the county clerks; and if, upon such examination, they shall find, by lapse of time, that such strays shall have become the property of the taker-up, they shall issue their warrant, under the seal of the county, directed to the sheriff, commanding him to collect the amount due the county, according to the provisions of this article, from the goods and chattels of the owner, or, if he is unable to pay, to levy upon and sell the real estate of any description that may be liable to execution, belonging in any way to him, in the manner provided by law for the levy and sale of real estate on execution; and such stray shall in all cases be subject to the lien held by the county, as provided in this article, and the county commissioners may order the sheriff to seize and sell the same.

Sec. 23. Justices of the peace, in their respective counties, shall have jurisdiction and take cognizance of all actions for the violation of this article, and enforce all the penalties and fines against persons who may be guilty of such violations; and it shall be the duty of any county officer who knows of a violation of this article to report the same to the nearest justice of the peace of the county.

Sec. 24. Upon the affidavit of any citizen of the county wherein such strays may be held or so taken up and filed with any justice of the peace of the county, setting forth that any person, naming him, has disposed of any stray, or in any manner violated the provisions of this article, and describing the stray in full, said justice shall issue his summons and writ, as is provided in civil cases, commanding the officer to take the stray into his possession, and summons the person who may have thus violated this article to appear and answer, as is provided in cases of replevin.

Sec. 25. All trials before a justice of the peace, under this article, demanded by the plaintiff, shall be by jury, of six competent men to be selected as in civil cases, who shall, if they find the defendant guilty, assess the fine to be paid by him, or the imprisonment to be suffered, subject to an appeal, as in civil cases.

Sec. 26. If, upon examination and hearing, it shall appear to said justice that this article has been violated, he shall assess the fine as herein provided, and shall order the officer to deliver the stray to any person who will give good and sufficient bond to the county to keep said stray until the expiration of the twelve months, at which time the title shall vest in him, as it would have done in the taker-up; and he shall be subject to the same liabilities and requirements as the taker-up.

Sec. 27. All the fines collected under the provisions of this article shall be paid into the county treasury, for the use of the common school fund.

Sec. 28. There shall be allowed for taking up strays the following rewards: for taking up any horse, mule or ass, fifty cents; for every head of neat cattle, twenty-five cents; for all other kinds of cattle, fifteen cents per head.

Sec. 29. The county clerk shall receive, for recording each certificate of strays, or forwarding a description of the same, as heretofore provided, thirty-five cents, whether such certificate contain a greater or less number of strays, and fifty cents additional for each animal described therein, to pay for the publication of the notice, as heretofore provided.

THE STRAY LIST.

BY AN ACT of the Legislature, approved Feb. 27, 1867, section 1, which said act applied the value of a stray of strays exceeds ten dollars, the County Clerk is required within ten days after receiving a certified description and appraisement, to forward, by mail, a notice containing a complete description of said strays, the day at which they were taken up, their appraised value, and the name and residence of the taker up, to the Kansas Farmer, together with the sum of fifty cents for each animal contained in said notice.

Stray List for the Week ending March 25.

Allen County—H. A. Needham, Clerk.
COW—Taken up by J. A. Caldwell, Deer Creek tp, one small cow, white, hind feet white, white stripe in face, white stripe behind right shoulder, white belly, spotted sides, hind part of rump and tail mixed red, tip of left horn broken off, 4 years old. Appraised \$15.

Anderson County—E. A. Edwards, Clerk.
PONY—Taken up by J. W. Paul, Washington tp, Feb. 18, one sorrel filly, 2 years old, no marks or brands, 14 hands high. Appraised \$35.
STEER—Taken up by F. G. DeLozier, Reeder tp, Jan. 29, one pale roan, and white Steer, 1 year old past, no marks or brands visible. Appraised \$12.

Bourbon County—J. H. Brown, Clerk.
STEER—Taken up by J. A. Dunaway, Marston tp, one 2 year old Steer, red, large white spot in forehead, white on belly, white spot on flank, no other marks or brands. Appraised \$16.

Brown County—Henry Isely, Clerk.
PONY—Taken up by John Corcoran, Hawatha tp, Jan. 21, one roan dan mare Pony, saddle mark on back, 22 or 13 hands high, about 4 years old. Appraised \$30.

Chase County—S. A. Breese, Clerk.
COW—Taken up by I. W. Coleman, Toledo tp, Mar. 11, one white and red speckled Cow, about 7 years old, no marks or brands visible. Appraised \$14.

Greenwood County—L. N. Fancher, Clerk.
HORSE—Taken up by G. Olson, Salem tp, Feb. 9, one bay horse, 6 years old, harness marks, 14 hands high, fore feet shod. Appraised \$25.
COW—Taken up by W. A. Smith, Lane tp, Feb. 16, one red Cow (with small calf) white tip in forehead towards right horn. Appraised \$18.

Steele—Taken up by Col. Kofford, Otter Creek tp, Mar. 2, one red and white Texas Steer, 4 years old, one ear cut off. Appraised \$17.

STEER—Taken up by J. B. Carille, Otter Creek tp, Mar. 2, one dun Texas Steer, 3 years old, white face, white line back, left ear slit. Appraised \$15.

Jefferson County—D. B. Baker, Clerk.
STEER—Taken up by John Carson, Jefferson tp, one Steer, 1 year old past, white with red spot on brisket, end of left ear frozed off, no marks or brands. Appraised \$13.

FILLY—Taken up by J. A. Coffey, Rock Creek tp, bay pony filly, dark mane and tail, 2 years old next spring. Appraised \$15.

Miami County—C. H. Miller, Clerk.
PONY—Taken up by J. W. Cannon, Mount tp, March 3, one sorrel pony mare, white stripe in face, about 14 hands high, no other marks or brands. Appraised \$25.

Pottawatomie County—H. P. Smith, Clerk.
STEER—Taken up by E. Spear, Louisville tp, Dec. 15, '73, one red Steer, about 1 year old, white face, white on head, white across shoulders, white on rump and under belly, end of tail white. Appraised \$12.

HORSE—Taken up by W. S. Everett, Helvue tp, Jan. 15, one sorrel Horse, 13 hands high, blaze face, color of eye on left shoulder, saddle marks, right hind foot white. Appraised \$20.

STEER—Taken up by C. Henneberry, Clear Creek tp, Jan. 24, one red Steer, white on back, hind feet white, head dark brown, 3 years old next spring. Appraised \$20.

HORSE—Taken by R. Roundtree, Shannon tp, Jan. 7, one brown and white Horse, 12 years old, mane and tail, saddle and harness marks, some white on right hind foot, about 9 years old. Appraised \$20.

COLT—Also, one last spring's bay pony mare Colt. Appraised \$12.

MARE—Taken up by G. Winn, Emmett tp, Jan. 7, one bay Mare, 12 or 13 years old, white face, roman nose, 13 hands high, both hind feet white above pastern, left fore foot little white, additional white on right hind foot. Appraised \$15.

COLT—Also, one bay Colt, 1 year old next spring, small white spot in forehead. Appraised \$5.

MARE—Also, one light bay Mare, 3 years old, 13 1/2 hands high, small white spot in forehead. Appraised \$15.

COLT—Also, one light bay Colt, 1 year old next spring, small white spot in forehead, light fluxy mane and tail, legs. Appraised \$15.

HEIFER—Taken up by A. Monton, Mill Creek tp, Mar. 8, one 2 year old red Heifer, line backed, white under the belly. Appraised \$18.

STEER—Also, one yearling Steer, red and white, star between the eyes, white in bush of tail. Appraised \$10.

Shawnee County—P. I. Bonebrake, Clerk.
STEER—Taken up by J. M. Haywood, Monmouth tp, Feb. 26, one 3 year old red Steer, blind in right eye, branded O and with some other indistinct letters on right hind, no other marks or brands. Appraised \$20.

HEIFER—Taken up by A. J. Kelly, Nov. 1, 1873, one light roan yearling Heifer, red ears, no other marks or brands. Appraised \$12.

Stray List for the Week ending March 18, 1874.

Brown County—Henry Isely, Clerk.
STEER—Taken up by James Bartholomew, Irving tp, Feb. 20, one roan Steer, 2 years old, no marks or brands. Appraised \$20.

STEER—Also, one roan Heifer, 2 years old, crop off left ear, slit or fork in right ear, no other marks or brands. Appraised \$15.

Cherokee County—Ed. McPherson, Clerk.
STEER—Taken up by Jesse Sholt, Feb. 12, Neosho tp, one Texas Steer, 10 years old, black and white spotted, crop off left ear, underloft off right, no other marks or brands. Appraised \$10.

Coffey County—A. Crocker, Clerk.
FILLY—Taken up by H. H. Errett, Liberty tp, one medium sized black filly, 2 years old, no marks or brands. Appraised \$15.

COLT—Taken up by G. W. Payton, Liberty tp, one medium sized yearling bay Colt, some white hairs, no brands. Appraised \$25.

Doniphan County—Chas. Rappelye, Clerk.
COW—Taken up by L. B. Smith, Wayne tp, one Texas Cow, red head and neck, white and red speckled body, red legs, crop off each ear, supposed to be 7 years old. Appraised \$12.

Labette County—L. C. Howard, Clerk.
PONY—Taken up by A. Berry, Mount Valley tp, Feb. 21, one bay mare Pony, light face, 12 or 13 years old, hind feet white, blind in left eye, saddle marks, sore back. Appraised \$10.

Lacy County—J. F. Weatherly, Clerk.
FILLY—Taken up by F. Wayne, Mount City tp, one light bay filly, 14 hands high, star in forehead, supposed to be 3 years old this spring. Appraised \$25.

Leavenworth County—J. S. Craig, Clerk.
COW—Taken up by Irwin Chestnut, Feb. 23, one red cow, 5 or 6 years old, crop off right ear. Appraised \$11.

COW—Taken up by Fred K. Beaver, Kickapoo tp, Feb. 27, one red Cow, white on belly, clip off left ear, straight cut off right ear, 8 years old. Appraised \$13.

LYON COUNTY—J. S. Craig, Clerk.
STEER—Taken up by N. Campbell, Pike tp, Jan. 21, one 3 year old Texas Steer, red and white spotted, swallow fork in left ear, crop off right ear, short tail. Appraised \$18.

COW—Also, one 9 year old Cow, red and white spotted, mostly white. Appraised \$15.

STEER—Taken up by S. A. Smith, Americus tp, Feb. 25, one red and white Steer, 1 year old past, medium size. Appraised \$15.50.

Miami County—C. H. Miller, Clerk.
FILLY—Taken up by Maria Gibbons, Onaga tp, Feb. 26, one bay filly, 2 years old, 14 1/2 hands high, some white on right hind foot and right fore foot, little white in forehead. Appraised \$20.

Morris County—H. W. Gildmeister, Clerk.
MARE—Taken up by J. Sturgill, Neosho tp, March 3, one 3 year old clay bank Mare, white spot in forehead, black mane, tail and legs. Appraised \$20.

MARE—Also, one 2 year old Mare, left hind foot white, blazed face. Appraised \$30.

Nemaha County—Joshua Mitchell, Clerk.
STEER—Taken up by Pat K. Smith, Logan tp, Feb. 17, one Steer, 1 year old past, pale red, little white below the horns, some white on back and belly. Appraised \$15.

HEIFER—Taken up by F. M. Sexton, Clerk.
HEIFER—Taken up by Pat K. Smith, Logan tp, Feb. 8, one Heifer, about 4 years old, white on flank and belly, star in forehead. Appraised \$15.

Stray List for the Week ending March 11.

Chase County—S. A. Breese, Clerk.
COW—Taken up by W. H. Cox, Bazaar tp, Feb. 26, one Cow, red and white spotted, brand on left side very dim, crop and two slits in the left ear, 6 years old. Appraised \$18.

Crane County—J. H. Waterman, Clerk.
MARE—Taken up by T. T. Gabbard, Baker tp, one Mare, 14 hands high, about 16 years old, collar marks on shoulder. Appraised \$15.

MARE—Also, one Mare, 14 1/2 hands high, chestnut sorrel, blind in right eye. Appraised \$20.

MARE—Also, one Mare, 13 hands high, bay, 9 years old, collar marks on top of neck, swelling on top of head. Appraised \$30.

Breeders' Directory.

MATHEW RYAN, Leavenworth, Kansas, Breeder of Short Horn and Imported Stock. Has now two (2) young Bulls and three (3) fine Heifers for sale. Pleasant View, P. O. Leavenworth, Mo.

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KANSAS

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MANHATTAN, KANSAS.

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POLICY BOARD OF REGENTS.

Extract from Minutes of the Board of Regents, September 3, 1873.

For the purpose of defining the policy of the Board of Regents, and as a guide to the Faculty in preparing a new curriculum:

Resolved, 1. That the object of this Institution is to impart a liberal and practical education to those who desire to qualify themselves for the actual practice of agriculture, the mechanic trades, or industrial arts. Prominence shall be given to agriculture and the arts, in the proportion that they are severally followed in the State of Kansas. Prominence shall be given to the several branches of learning which relate to agriculture and the mechanic arts, according to the directness and value of their relation.

2. Upon this basis, the Faculty are requested to submit to the Regents three courses of study, each requiring four years for its completion; the first to be especially designed for those who wish to become farmers; the second for those who desire to become mechanics, or industrial artisans; and the third chiefly for young ladies, that they may be prepared to earn an honorable self-support, and to adorn the highest stations of life.

3. Degrees shall only be given to graduates, yet the Faculty are requested to indicate what studies would, in their opinion, be best for pupils who can spend but one, two or three years in either of the above departments.

4. Thorough instruction shall be given in the English language, and neither Latin, German nor French will be required as a part of either the full or partial course, but shall be optional with the parent or pupil.

CALENDAR:

FALL TERM.—September 11.—December 24, 1873; 15 weeks.
WINTER TERM.—January 1.—March 25, 1874; 12 weeks.
SPRING TERM.—April 2.—June 24, 1874; 12 weeks.

EXPENSES. Tuition is absolutely free, except a charge of six dollars a term for those receiving instruction in instrumental music. No contingent fee. Boarding can now be obtained at from three to four dollars a week.

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For further information, apply to J. A. ANDERSON, President.

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