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THE KANSAS FARMER.

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The Railroads and Middle States Farming.

A traveller through the Middle States of the Union can not fail to be struck with the evidences of decadence of farming that meet the eye on every hand. In New York, New Jersey and Pennsylvania, agriculture had ceased to make any actual progress; relatively, it is on the decline, and this not only in the more isolated sections, but those that verge upon the great lines of travel. The farms have a neglected and poorly cultivated aspect; the homes are dilapidated; the implements are scant and mostly old, including a few of the modern labor saving inventions; and the farmers and their dependents show evidences of poverty that ill befit the reputed prosperity of the American yeoman. With the exception of a well-to-do few of exceptional enterprise, the utmost hope of the farmer is to eke out a bare living by much toil and little enjoyment. He has no longer any surplus to send to the market; he produces to supply merely his own necessary wants and the limited local consumption. He has consequently no chance for expansion, no incentive to ambition, and he drags along from year to year, getting worse rather than better. In very many cases, the product of the farm does not suffice to support the owner and pay the taxes; and a system of borrowing has consequently been adopted which has placed a large portion of the land under mortgage, the burthens of which are steadily bankrupting the owners. This is a true representation of the condition of two thirds of the farmers of the Middle States—a picture that strangely contrasts with the condition of things that existed twenty years ago.

Taking New York State as a specimen of this relative decadence of the agricultural interests, we find that while the city and suburban population increased, between 1865 and 1875, from 2,413,708 to 3,256,768, or at the rate of 34.93 per cent. the rural population increased from 1,414,110 to 1,442,190, or at the rate of only two per cent.

Dairy farming (which has been stimulated by the factory system,) hay, potatoes and hop growing are almost the only branches of farming that made any progress between the years 1860 and 1874.

The number of farm animals (horses, milk cows, sheep and swine) has diminished, during the fourteen years from 5,155,362 to 4,008,736, or at the rate of 22 1/2 per cent. The five principal cereals have increased about 4 1/2 per cent. The wool crop has fallen from 9,454,473 lbs to 7,369,982 lbs. Yet while there was this preponderant backwardness in agriculture, the aggregate population of the state increased in the interval 818,223, or at the rate of 21 per cent. Thus the agricultural interest has utterly failed to keep pace with the general progress of the state; and therefore, relatively, farming is retrogressing. Nor is this the worst aspect of the case. The impoverished and debt-burthened condition of the farmers leaves no hope for their recuperation, but rather foreshadows a still worse condition of things in the future. What we have here shown to exist in New York is but a specimen of the state of affairs in Connecticut, New Jersey and Pennsylvania also; and the conclusion to be drawn is that, in this group of states, farming is verging towards a condition of things in which it will be virtually confined to dairy products and vegetable growing, to the extent necessary to supply the city populations, while the larger and more solid branches must steadily decline.

These are the results that have followed the introduction of railroads. The states thus affected are pre-eminently supplied with railroad facilities. They are more thickly gridironed with railways than any other part of the country, having, 20,230 miles of track, provided at a cost of \$990,000,000. The companies have been granted the most valuable franchises that have ever been conceded to railroads, in the expectation, first of all, that large benefits would accrue to the citizens of these respective states, and therefore with the implied understanding that the interests of the people making these grants should be especially considered. Yet the fact is undeniable that the period of the chief development and prosperity of these roads has been coincident with the decadence of the agricultural interests of the respective states. This coincidence is not an accident; it is clearly traceable to causes connected with the policy

of the railroads. The cause of the decadence is not in the lack of vitality and resource in the lands of the suffering states. The lands are good; their owners or occupiers have had the means of properly cultivating them; and, with the enjoyment of fair facilities for transportation, they could be made largely productive and their cultivation might become remunerative. How then does it come to pass that, in this large section of fine farming country, agriculture is being gradually crushed out?

The answer is to be found in the policy of the railroads. A system of discrimination in favor of the Western farmers has been uniformly acted upon. Added to the great natural advantages the Western farmer has enjoyed through getting fertile virgin lands at a nominal price, the railroads have brought his produce to the Atlantic at a nominal charge, as compared with that levied on the farmers of the seaboard states. Competition between the trunk roads at points where they meet has fixed the charges for carrying Western products at rates frequently below the actual cost of carriage and generally so low as to leave no fair profit on the cost of the service; and the state farmers on the route of the road, instead of being permitted to enjoy their advantage of contiguity to the market, have been taxed to make up for the deficiency of charges for bringing forward the Western crops; in other words, the farmers of the Middle states have been compelled to contribute upon all these products sent to the ports a large percentage of their value to enable the Western farmers to send their produce to market to compete with them. The farther the Western farmer emigrated westward, the more aggravated this pressure upon the local farmer became; until at last a point has been reached at which the seaboard farmers are virtually shut out from the use of the railroads, except for a few articles, and all they can do is to produce for a narrow strictly local consumption; in which also they are subject to competition from the cheaply carried Western products being brought to their door.

It is useless to cumber our remarks with specimens of the gross inequality between the charges for Western and way freight, for they are matters of common knowledge; grain being brought from Chicago at rates which, allowing for distance, are equivalent, on an average, to one-eighth only of those charged to the farmers of our own state, excepting those fixed for competitive points in the state, such as Rochester, Utica, &c. Under such a system, no other fate could happen to the farmers of the Middle States than that which is befalling them with such destructive effect. In the states which are geographically best suited for supplying the export markets,—which should have an advantage in the cost of carriage to part of five to ten cents per bushel over Western states, production is suppressed by rates for carriage which shut the farmer out of the market. Thus, by an arbitrary regulation of rates, agriculture is being extinguished in one section and artificially built up in another. What the result will be when the trunk roads have thus dried up the sources of their local travel, it much concerns the railroad companies to consider. Having relatively less local traffic than they can tax to support the Western, they will be driven to charge proportionately more for carriage from the West; and the increased toll on Western products will put that section at a disadvantage in supplying the European markets, which in turn will react upon Western agriculture none too profitable already, and produce in that section a severe relapse. This sort of outcome from the artificial stimulus now applied to Western development is inevitable sooner or later; and, when it arrives, the railroads will have reason enough to regret their folly in having slaughtered the agricultural interests of more favorably situated sections.

In the meantime, the farmers of this group of states should have something to say about the treatment to which they are subject. They constitute an important element in that sovereign power of the people from which the railroads received their charters. The powers they conferred upon these corporations have been turned directly against their interests. Those powers have been exercised to protect the foreign producer at the expense of the state farmer; and this effect comes about through natural and equitable arrangements, but through a system of charges that wholly disregards the comparative cost of the service rendered to the home citizen and to the foreign respectively. Such a policy of discrimination amounts to a direct breach of faith between the railroads and the states to which they owe their privileges; and, unless the farmers are insensible to their endangered interests, they will lose no time in

inquiring what measures should be taken for remedying the abuses of power that are thus surely ruining them.—*New York Bulletin.*

The New Homestead Laws.

We publish the following rulings by the General Land Commissioner upon the recent new homestead law. It is of general interest: Register and Receivers of United States District Land Office.

GENTLEMEN: I have to call attention to the provisions of the act of Congress entitled "An act to grant additional rights to homestead settlers on public lands within railroad limits," approved March 3, 1879.

1. That act provides that from and after its passage "the even sections within the limits of any grant of public lands to any railroad company, or to any military road company, or to any State in aid of any railroad or military road, shall be open to settlers under the homestead laws to the extent of 160 acres to each settler," thus doing away in this class of entries with the distinction between ordinary minimum and double minimum lands, of lands held at \$1.25 per acre and lands held at \$2.50 per acre, which had existed under section 2,289 of the Revised Statutes of the United States, so far as the double minimum lands may be found in even sections within the limits of land grants for railroads or military roads. Congress has not seen proper to extend this provision of the act so far as to embrace any double minimum lands which may be found in odd numbered sections or in the limits to grants for any other description of public works. It must be held to be inoperative in any case where the even sections are granted and not reserved. You will observe the change in the law, as above noted, in future proceedings respecting the entries under said section 2,289 of the Revised Statutes; observing however, that the commissions are in all cases to be computed on the cash price of the land under the third and twelfth subdivisions of sections 2,238.

2. The act further provides that "any person who has, under existing laws, taken a homestead on any even section within the limits of any railroad or military road land grant, and who by existing laws shall have been restricted to eighty acres, may enter under the homestead laws an additional eighty acres adjoining the land embraced in his original entry, if such additional land be subject to entry, without payment to fees and commissions, and that "the residence and cultivation of such a person upon and of the land embraced in his original entry shall be considered residence and cultivation for the same length of time upon and for the land embraced in his additional entry, and shall be deducted from the five years' residence required by law," with the proviso, however, that in no case shall patent issue "until the person has actually, and in conformity with the homestead laws, occupied, resided upon, and cultivated the land" embraced in his additional entry "at least one year."

Upon any party proposing to enter an additional tract under these provisions you will require him to make homestead application and affidavit, according to annexed forms. Nos. 1 and 2. You will then, if you find his original entry to be intact on your records, whether patented or not, and if no objection appears in any respect, allow the entry applied for, note the same on your records, giving it the proper number in the regular homestead series, and report it with your monthly homestead returns, indicating its character as an additional entry under said act on the margin of the monthly abstracts, with a reference to the original entry by its number and the description of the land. The money columns in the abstracts will of course be left blank, since there will be no fees and commissions paid.

In the class of entries the party if still resident on that original entry tract, will not be required to remove therefrom to the additional entry tract in order to make a new residence on the latter, as the two forming one body of land residence on either will be regarded as satisfying the legal requirement, but in making final proof on the additional entry the party must show such residence with occupancy and cultivation of the tract taken as additional entry said act, for five years from the date thereof less the time to be deducted on account of residence and cultivation on the original entry, which shall not exceed four years in any case.

3. The act further provides that, if the person so elect, he may, instead of making an additional entry, "surrender his existing entry to the United States for cancellation, and thereupon be entitled to enter lands under the homestead laws the same as if the surrendered entry had not been made," with the same provisions

as regarded fees and commissions not being required, and requiring settlement and cultivation occupation, and residence as have been already stated with regard to additional entries. In case of any party electing to surrender his entry under this act you will receive his relinquishment, which shall specify for what purpose made, and be accompanied by the receipt issued for the relinquished entry or by a statement under oath showing a good reason for its absence report the case in a special letter to this office, and await instructions before proceeding further in the matter. Existing regulations will be observed as to the manner of executing relinquishments. Very respectfully.

J. A. WILLIAMSON,
Commissioner.

Stone Drains Better than Tile.

Geo. Howatt, giving his experience on draining, in the *Country Gentleman*, prefers stone to tiles. When stone can be procured in Kansas in close proximity to land that needs draining, we believe stone would be altogether preferable. Kansas is noted for its flat, flag-like stone, which would build admirable trunks for underground water courses. On this subject Mr. Howatt says:

I have drained over one hundred acres in one piece of swamp land with stone and tile. Nine car loads of tiles were ordered at Albany, N. Y., which had to travel over 300 miles, on three railroads, so that they were pretty expensive tiles on their arrival. I have also dained with split timber, round timber and brush. We buy and borrow a great deal from our English Cousins, but in that we are independent. Tiles used for the simple reason that they are fashionable. Our English cousins use tiles because they are cheaper than stone. The stones that they cover tiles with are broken in prisons to certain sizes and carted over fifty miles. I was engaged in draining the Downham Flats, Norfolk Co., England. I know something about the *modus operandi* of draining. In all my experience of draining I have never had to take up a bursted stone drain, but have frequently had to take up bursted tile drains. I would much rather make 300 feet of new drain than take up and relay 100 feet of a bursted drain.

As to the depth of putting them, this of course depends on what you are draining for, whether for surface or bottom. Let it be distinctly understood that it is cheaper to put a drain six feet deep than three. (I mean the paying effect in the end.) Unfortunately draining is very imperfectly understood. It is generally thought all that is to be done is to dig a channel two or three feet deep; lay a board on the bottom; place tiles on it; cover with straw, and then fill in the earth, and all is done. I know a gentleman who has one thousand acres done so, and laid forty feet apart. Strange as it may seem, he has depreciated the value of his land in the growing of crops; particularly his specialty of pasturing and hay. The water he is carrying off should be left to bind his sandy soil. When it is dry it blows to the four quarters of the globe, his neighbors getting all his special manures.

In using stones open the drain according to the size of the stones. The man that is laying the drain builds on each side of his foot, cap with any sort of stone, round or flat. When filling a large drain, I keep a pair of horses, mules or oxen on one side, and a road scraper on the earth side, with an ox chain or two attached to the scraper. If the ground thrown is hard we plow it before scraping. By using stone we are getting ready for the mower and reaper. In some cases it may be necessary to lay boards under, but generally, when such is required, I lay stones under and build on them. When we are in a quicksand, we find them much more substantial than boards and tiles.

Treat Your Team Kindly.

C. R. D., tells of the following anecdote in the *New York Tribune*:

Don't get angry at a dumb beast, just because you sometimes fail to understand each other. Animal nature is very much like human nature—and it appreciates kindness or resents insults or outrage in precisely the same manner. A few days ago, while out with a friend in the vicinity of Washington, I saw a darkey ploughing a bit of scrubby bottom land that had not been tilled since the war. The roots were tough, and the horse was tired and at length refused to pull, so the darkey, after deafening the animal by his screaming, cut a beech rod and—lost his temper. Of course the horse was frightened and pranced and kicked in fine style in his endeavors to get away from his merciless master; then the negro unfastened the trace

chain and began to belabor the poor animal most unmercifully with no other effect than to put "the ole debil" into him worse than ever. Not caring to witness any further exhibition of cruelty, I stepped up to the trembling animal, and with a word to the man, took the bridle in my hand, and patting and stroking the horse's nose and face, let him rest and become quiet. He soon had confidence in me, and a few moments later, when the colored man took the lines in hand once more, only a little more patting and coaxing was required, and away he went as briskly as could be desired. As my friend was sketching in the vicinity, I remained until after the ploughing was finished, but there was no need of further blows. Have you an ugly horse? If so, don't lose your temper, and set him an awful bad example.

A correspondent writing to the *Country Gentleman* on the advantages of co-operation remarks: "A single person working by himself in agriculture will not, it seems plain, obtain more food than that which he requires for his subsistence. Several persons' combining their labor in the most simple operations in agriculture, will obtain more food than they require. They will obtain a surplus produce, and that may either be used as capital or for the employment of more labor." Now, if farmers would co-operate in both capital and labor, much more for their common good would be accomplished. In many sections of our country this great principle is being carried out. The grange movement is only a co-operation to resist combination on the part of middle men and railroad corporations. Cheese factories and creameries are also the practical results of farmers' combining for their own profit. It is evident to all that much labor now wasted in making up our dairy products could be saved by a movement of this kind. The fact that by this system a much better class of either butter or cheese is made ought to be a sufficient reason to embark in it.

Indian corn is being extensively used in London for feeding horses. The American consul general at London says: When the land-locked water way from the Mississippi to the Atlantic is opened, as it is sure to be in due time, the immense corn crops of the Mississippi valley will find a cheap outlet to the markets of Europe, and an immense export in trade in breadstuffs will be the result.—*Florida Dispatch.*

The Indiana Farmer says of the wheat crop in that state:

"Reports from almost all directions speak favorably of the wheat prospects. The harvest will begin in the central counties of the State the last week in this month or the first week in July.

The largest strawberry farm in the world is probably that of John R. Young, Jr., about two miles from Norfolk, Va. It comprises about 250 acres. The yield last year was 2,000 quarts to the acre, and it is expected that the product will be much larger this year.

Never try to get a very heavy day's work out of a team. Moderate and steady going is what counts in a long race, and the farmer's race is a long one. It takes but a few hours, or even a few minutes, to so tax a horse that he is out of fix for months.

It is stated that within the last eight months some fourteen joint stock companies have been formed in the United States and Canada for the manufacture of sugar from beets. The satisfactory success of the Maine company, has given an impetus to this particular industry.

Five hundred people attended the fourteenth annual sheep-shearing of the Southwestern Wisconsin Wool Growers' Association, at Caldwell Prairie, in Racine county, on the 7th inst. A grand dinner was served.

The national department of agriculture reports the number of swine in the United States in 1869, at 23,482,476 head, and in the year 1878 there were 32,262,500.

Cling to the farm, make much of it, put yourself into it, bestow your heart and brain upon it, so that it shall savor of you and radiate of your virtue after your day's work is done.—*Exchange.*

Over two and a quarter million acres of land have been taken up in Kansas during the past nine months, under the homestead and Pre-emption laws.

The wool clip of California is reported as fair in amount of production.

Be black

Farm Stock.

Quietude for Cows—Labor for Taurus.

My experience of over fifty years has convinced me that cows kept in the stable the year round—a proper stable, of course—and thoroughly and regularly stabled throughout the green-fool season, and judiciously fed and handled, may be made fifty per cent. more profitable than the same cows would be if required to graze in summer, and exposed to the inclemencies of a northern climate, as dairies are usually kept. I would grant only occasionally a few minutes' freedom in a suitable dry yard, and only when the temperature is temperate. The yard should be small, and only a few animals turned out at a time, or they will exercise too violently, or injure the feeble and timid by crowding and going. The underlings should be separated from the herd when put out for exercise.

If any of the herd are prone to run too violently, as some will, such should be liberated more frequently, but should in no case be allowed to become specially wearied or heated, and, as a rule, thirty to forty minutes is all the time required by the cow for exercise for a week. They should always be watered in the stall, and, if practicable, should have a constant supply of running water, and that which is absolutely pure. I find that the average cow will drink from five to eight times in twenty-four hours, if the water is accessible, in hot weather. I kept a cow in the stall twenty-seven months as an experiment, and milked her twenty-five months, and after she ceased to milk I continued to feed liberally for eight weeks, when she went to the shambles and "died well." Of a herd of twenty-three, this one was the most profitable.

Few cows, or but a small proportion of them, will continue to milk so long as did the heroine of the twenty-seven months' experiment. If fed liberally, the average cow will generally cease to milk profitably after twelve to eighteen months, and the nourishment will secrete flesh and fat. The capacity of the stomach of the cow is of course limited, and as she can only eat so much, if a portion of that is required to supply the physical waste occasioned by muscular exertion, it must detract proportionately from the lacteal secretions; hence all unnecessary exercise for the cow should be avoided, and it is conceded by the most intelligent dairymen of the world that very little, if any, is necessary for most cows, though I have no doubt there are exceptions, but I have not seen an instance in which a cow did not maintain a normal condition under the system of quietude recommended.

Taurus, on the contrary, is the better for daily exercise, and he is, if well fed, capable of performing a large amount of valuable labor. A three-year-old bull, properly harnessed and with a proper vehicle, is capable of hauling all the soiling crops to the stable, and all the manure to the fields, and cutting or chaffing all the cut fodder for a herd of fifty cows. The stamina of his get will be greatly enhanced, his labor will be worth as much as the ordinary farm horse, which costs much more to keep, and if properly worked he will never be vicious. In no animal, except in man, is the adage, "Idleness is the parent of vice," more thoroughly verified than in the bull. I have worked bulls for twenty years, and I never knew one of any breed to be cross if he was properly worked.—J. Wilkinson, McHenry Co., Ill., in N. Y. Tribune.

Future of the Draft-Horse Business.

Breeders of draft horses have every reason to feel encouraged. There has never been a time when good, heavy horses were in greater demand than at present; and the prices which such horses now command are very little, if anything, below those of five years ago.

Notwithstanding the extensive importations of draft stallions from France and Great Britain to the United States during the past ten years, the supply of large, well-formed draft horses in this country is still largely below the demand; for as the supply increases, the demand grows apace; and little horses, unless they possess exceptional speed, are correspondingly neglected.

We are satisfied that the increased size, which must inevitably result from the extensive use of these imported stallions in the west, cannot fail to have a beneficial effect upon other classes than those especially used for draft. Many of the stallions imported from France show unmistakable indications of possessing a large share of the Percheron blood, once so famous for ability to make long journeys at a quick pace with a heavy load, and from their descendants in this country, out of well-bred mares, we may reasonably expect to produce, by a proper course of breeding hereafter, another type of horse for which the demand is active, and the supply very light—good, stylish, high-stepping, large coach or park horses. The use of the Clydesdale is also giving us a foundation of much the same sort, upon which we can build, with large, stylish, thoroughbred, and well-bred trotting stallions of good size and style, with certain profit.

Breeding for speed alone is at best an uncertain business; and when to this uncertainty we add the expenses of training, the chances of profits are so slight, that we would not advise any general farmer to engage in the business, either with trotting or running horses. As an amusement or recreation for gentlemen of wealth and leisure, it is most fascinating; but those who have found it a remunerative business are scarcer than 2-20 trotters. On the contrary, those who breed large, stout, and well-formed draft, or active, stylish, good-stepping coach or

park horses, invariably find a ready sale, at good prices, and this demand must be a permanent one.—Nat. Live-Stock Journal.

The Jersey for Butter.

The milk of the Jersey is better adapted for butter-making than cheese; it separates its cream more completely than that of the Ayrshire and its cream usually churns into butter more readily. The milk of the Jersey breed has larger globules than that of the Ayrshire. The varieties between the time occupied in churning is determined by the milk globule and we find the cream with the largest globule takes less time to churn. The richness in globules and their readiness to separate renders the milk of the Jersey unsuited for the manufacture of cheese and there is a difficulty experienced in retaining the cream in the cheese. A certain quantity rising to the surface in the intervals of manipulation will not again mix with the milk in the ordinary process of making and is accordingly lost to the cheese. A milk whose globule rises quickly and completely would seem to aggravate this trouble wherever used.

For butter, the Jersey milk is well situated. The cream rises quickly to the surface and churns with great facility under favorable circumstances, and little of the butter remains in the skim milk. The size of the globule however allows a large amount of nitrogenous matter to remain entangled with the butter and theoretically this would affect its keeping as ordinarily made. The butter is usually of an orange yellow color.

Diseases of Hogs and Chickens

"L. J. T." of Hutchinson, Kansas, in *Ohio Farmer* says on the above subject.

"Some years ago I lost some hogs and chickens with what was called cholera. This led me to study somewhat the nature of the diseases with which my stock was affected. From this I learned that what is popularly known as cholera is in fact several different and distinct diseases. My chickens, at the time referred to, were afflicted with a disease of the liver. When a fowl was examined after death, this organ was found to be enlarged two or three times its natural size, the natural consistency being very much changed so that it presented little or no resistance to the knife, and seemed ready to break down of its own weight. Colicoid, administered in small doses in the food, was found an efficient remedy, if given in proper time. In other cases the seat of the disease is undoubtedly located in the intestines. For many years my flocks have been entirely free from this disease, although my neighbor's fowls have often died off at a fearful rate. My custom is to occasionally dissolve some copperas or green vitriol in the drinking water of the fowls. I also occasionally mix in the food a small amount of cayenne pepper and sulphur. My chickens have been remarkably healthy. I have, however, at long intervals, lost one with some difficulty in the crop. This would become largely distended with a watery fluid, the fowl would droop, and in from one to three days, die. I knew of no remedy. Two years ago a fine Light Brahma pullet was attacked. I determined to experiment, so I gave her a good dose of common spirits of camphor. I expected her to die, but to my astonishment she recovered. I have not lost one since. Much of what is called hog cholera is caused by intestinal worms. These sometimes attain to a foot in length and as large in size in the largest place as a common lead pencil. These often fasten themselves by their heads to the inside of the smallest intestines, where they live on the juices imbibed by suction. I have seen these so numerous that the whole passage was filled with them. At times they let go and wander about through the various passages of the system. I have known them to get into the windpipe and lungs, and thus strangle animals that appeared to be in fair health. I have found an occasional dose of sulphur and copperas as the best preventive I have ever tried. Hogs thus treated have never suffered with anything like cholera for me.

Copperas is also, as I believe, a specific for kidney worm that so often affects hogs with an apparent weakness in the back or loins, sometimes causing them to drag their hind parts. An occasional dose of this in the slop will destroy most of these internal parasites, and prevent much disease among the swine of the country. In dealing with these diseases, prevention will generally be found the surest remedies."

Horticulture.

Strawberry Culture.

I see an item in the *FARMER* of May 28th, on board mulch for strawberries. It might be a good thing but it would be too expensive when lumber sells for \$30 a thousand. I think clean oat straw a better mulch than boards. I have had some experience in the culture of strawberries, as I raised them for the Chicago market for several years. I tried different kinds of plants and found the Wilson-Albany the best variety for home or market use. It is a dark red berry when ripe, firm and solid and will not crush. There are many newer varieties that are spoken highly of, but for general use I like the Wilsons the best. I think hand culture the most profitable for home or market use; you get fine large berries and the plants will last longer. My plan is to prepare a bed with some well rotted manure, but not to have it too rich; the soil should be sand and clay loam. Plant, either early in spring or in September, eighteen inches apart each way. In October hoe all the weeds out of the bed and scatter oat straw over

the bed so that it will measure three or four inches when it settles down. If the plants are slow in coming through the straw in the spring, part the straw from over the plants with your hands. After they are done bearing take off the straw that has not rotted, hoe the weeds if there are any, cut off all the runners, then put the straw back and some fresh straw over it to make the required thickness.

Plants, if taken proper care of, will last four years, then they should be removed and young ones put in their place. It is a good plan to have a succession of beds as the first and last crops are the poorest. Straw is the best mulching there is. It keeps the berries clean, it protects the plant from drought in summer and from frost and cold in winter. It keeps down the weeds, hinders the runners from taking root and enriches the ground. There is not much labor in taking care of a bed large enough to supply the table with that delicious fruit, and have some to can for winter. I need not mention the pleasure there is in having a well made strawberry cake brought before you to induce you to plant a bed in your garden.

T. W. H. W.

Coal Creek, Russell Co.

The Cultivation Of Raspberries.

There is nothing easier to grow than the raspberry, and of all our small fruits it is the most wholesome and to be preferred. The blackberry may be as wholesome when it is in perfection; but the strawberry, while it is a delicious fruit and preferred by many to all others, is positively injurious to a considerable proportion of persons. It contains an acid of a very peculiar and powerful nature. It affects the blood and produces eruptions; and people subject to gout are prohibited from touching the fruit. Raspberries, on the other hand, are not merely innocuous, but they are extremely wholesome and can be eaten in any desired quantity.

Raspberry canes should be planted three feet apart in the row, and rows three feet and a half to four feet apart. Cut down the canes to within six inches of the ground and set firmly. We prefer a rather moist spot for them, and if in the shade a portion of the day, so much the better. They can be planted under fruit-trees where scarcely anything else will grow, and the berry will be larger and finer. They like a cool, moist soil, kept so by liberal mulching with leaves, light manure, or any trash, and if a foot in depth it is an advantage.—*German-town Telegraph*.

Advantages of Summer Pruning.

Perhaps the want of care to fruit trees, especially to young apple and pear trees, is nowhere more noticeable than in neglect of proper pruning. Young trees set in good situations are left to themselves, and in a few years have a superabundance of wood, so much so, indeed, that they bear little or no fruit at an age when they should be a source of profit; or they have a large and unbalanced top which can only be put in proper shape by saw and knife, to the injury of the tree. And this could all be avoided by attention to summer pruning, often without the use of pruning tools, in the early period of the growth of the trees. It is not uncommonly the case that one finds healthy, well-grown fruit trees that have been kept in shape wholly by the use of the thumb and finger, brushing off the buds here, and shortening in or removing the branches there, having been the only pruning the trees have received. When trees have been left to grow as they have pleased for a number of years, and then are taken in hand with saw and pruning-knife, it is not an easy matter to make good-shaped trees of them, while the severe cutting off of the large branches often gives the tree such a shock as it is a long time in recovering from.

Now the better mode, in fact the only true way, is to summer-prune gently, while the tree is young, and then keep it within easy control, and make of it just such a tree as you wish. A sharp pocket-knife is better than the thumb and finger, and is the only pruning implement ever needed. Clip off the ends of the side shoots, and where two are inclined to grow near together, or in the same direction, or to cross each other in such a way that they would interfere with one another when they become large, and in this way shape the top of the tree at will. This shortening of the shoots also checks the sap, and by this means fruit buds are developed, whereas without it the branches would only grow leaves for a long time. The earlier fruitfulness of the tree is therefore induced, and profit sooner obtained. Not only this, the leading shoots make a vigorous growth, and are better enabled to withstand the cold of winter, than where from an excess of woody growth full development is not attained. This delightful work of summer-pruning—for it is delightful, is not labor, but a pastime, making one acquainted with his trees, which he learns to love—should be kept in hand constantly through the season, and the top of the tree shaped at will.—*American Cultivator*.

Root-Pruning Tillage.

The benefits of cultivation are well known, but the explanation of the reasons for the effects are not so generally understood. Stirring of the soil that it may absorb moisture, and weed-killing, are held by the majority to be the reasons for cultivation. The killing of weeds, that they may not choke the crop, and that the right plants may have the benefit of the fertility of the soil, is an essential feature of crop raising; but if that and the absorption of moisture were the only good results derived, then we had better sell our horse and hand-hoes, and save our labor. What good farmer has not observed

that cultivation in wet weather, when the soil was thoroughly moist, was remarkable for its effect on the crop, sending it forward with wonderful rapidity? The hoeing of cabbages at such times, is the most common, and very beneficial. But, according to the old view of the matter, if the theory was correct, hoeing when the soil is dry would have the best effect. Then there must be something wrong with the old idea.

Dr. Sturtevant, of Massachusetts, an able experimenter and thinker, tells us that there are two other reasons for the tillage of a growing crop, or "interculture," as he terms it. We all know that a mulch of fine straw, sawdust, or even of sand, will keep the soil moist, and often save a strawberry or other crop, or keep a newly-set plant from drying up. The action of the mulch is not to absorb moisture from the atmosphere, but rather to prevent evaporation from the soil; which evaporation means the passing off into the air of the soil moisture, and the consequent drying up of the earth. The mulch acts as a barrier to and preventative of evaporation, much as a woollen garment prevents the escape of heat from the body. As the woolsen is a poor conductor of heat, so the mulch is a bad conductor of moisture.

Now the stirring of the dry soil breaks up the communication between the surface and the moist earth beneath, making in effect a mulch of the layer of light, dry soil; thus benefiting the crop in a drouth by preventing the escape of moisture, and keeping what is in the ground, rather than absorbing water from the air by day, or gathering the dews at night. The small amount of dew condensed and absorbed by the soil is easily realized by stirring what was dry earth the day before, on the morning after a heavy dew, and observing how little it is moistened, not deep enough to reach the roots.

So much for shallow cultivation. Let us see what Dr. Sturtevant says about deeper work. In hoeing or cultivating we must necessarily cut numerous roots. Where a vigorous growing root is cut, several new roots immediately start forth, thus multiplying the feeding power of the plant. In wet weather hoeing of cabbages, the conditions are entirely favorable for the sprouting of new roots, which doubtless explains why hoeing at that time is so beneficial. It is a not uncommon practice to dig around a tree which is spending most of its energies in producing wood and foliage; the result of which digging is to cut off a large number of its roots, stopping its growth for a time, and allowing it to mature, and changing its energies from wood and foliage to fruit production. Why not apply the same process to corn, wheat, and other crops? We do. And we have been root-pruning ever since our fathers began to handle a hoe or run a cultivator; but we didn't know it. We were waiting for Dr. Sturtevant to tell us what we were doing. Cutting the roots checks the growth for a time, and allows the plant to mature; and as soon as the root is severed, several small roots start out where but one grew before, and so many more feeders are given the plant; and since the checking of the growth turns the energies of the plant to using its already stored up nutriment in fruit production, when the new feeders begin to work they contribute directly to the same end.

A plant or an animal often develops to excess in one direction, to the detriment of other parts, as a cow to beef, with little milk; or a plant to foliage, with little fruit. As Goethe expressed it, "In order to spend on one side, nature is forced to economize on the other side." Plants grown on a too fertile soil often develop a too large expanse of leaf, with but few flowers and little fruit. To turn this rampant growth in the direction of fruit and profit, we must change its course. We do this by checking the growth by "root-pruning;" thus directing the energies of the plant to seed and fruit production. This is the work of deep cultivation.

In cultivating corn, Dr. Sturtevant, to root-prune, runs a deep-cutting, sharp-toothed cultivator three times through the rows, beginning when the leaves reach knee-high, and stopping when the blooms appear, or when the tassels show themselves, it being too much for the plant to cut their roots much after that period. This deep cultivation, too, or "root-pruning," will only be found advantageous on a rich soil either naturally fertile, or made so by artificial applications, as the conditions we wish to change are only present thereon, that is, excessive leaf growth to be changed to seed production. Herein, too, lies another argument for high manuring, as the more we fertilize, the more profitable will be our cultivation.

Shallow interculture is beneficial as often as one can afford to do it, say once a week or less often. Drilling and hoeing of wheat is based on these same principles. Now, knowing why we cultivate, we should be able to practice "interculture" to the greater advantage of the crops, and our profit.—*American Agriculturist*.

Miscellaneous.

When to Cut Grass.

Farmers have changed their opinions, and to some extent their practices, as to the proper time for cutting grass for hay. In olden times they thought clover should be pretty much out of bloom and timothy should begin to shell out the seed a little before it was in condition for cutting. Their practices were still more dilatory than their theories, for timothy was often allowed to stand until it was so ripe as to be but little more nutritious than woody fiber before it was cut.

The experiments of progressive farmers, who have found that stock flourish best on grass cut when in bloom, and the more careful and accurate experiments of scientists, who have dem-

onstrated by analysis that grass cut when full of its juices, before a large proportion of its sugar and starch is converted into indigestible woody fiber, will nourish stock much better than that cut later, have brought about a gradual change in the aims and methods of farmers. We could give elaborate tables from analyses and experiments by German savants, showing that grasses are much more nutritious before blossoming than after, but suffice it to say that as soon as grass or clover has attained its full growth and begins to put forth the organs of reproduction, the proportion of digestible matter decreases, and consequently it loses a portion of its nutritious properties. Practical dairymen have proven by experiment that blue-grass, cut before it blossoms, and carefully cured, would cause cows to make nearly as much butter, or beets to lay on nearly as much fat in winter as they would on the fresh grass in summer.

In view of these established truths it is advisable for farmers to cut their forage for their cattle when it is in the best condition for nourishing them, and that would seem to be, according to the best authorities, when it has fully attained its growth. If all the grass in a meadow attained its growth at the same time, it would probably be expedient to cut it just before it is in bloom rather than just after. But we know that grass seldom grows perfectly even; that some spears will commence blooming while others are but half, or two-thirds, or three-fourths grown, and that to cut it as soon as the most forward begins to bloom would give us much less burden to the acre, and undoubtedly much less nutritious food than to wait until a portion, perhaps the larger portion, is fully in bloom.

One objection, and we confess that it is quite a forcible one, against cutting grass while it is in bloom, is that it then scatters the pollen so as to make the hay dusty, and bad for horses to eat. In consequence of this, many good farmers have adopted the practice of cutting their grass, timothy and red-top especially, after it has shed its pollen, and possibly this is the best time for getting the largest amount of nutritious food from the ground, although we think that if we could always choose our time we should prefer to cut it after it has headed out, and before it is in blossom. When a plant has once attained its growth, chemical changes take place rapidly, the stalk hardens so as to be able to sustain, in an upright position, the forming seed, and much of the solvent juices left, flow into the head to nourish the seed. In nature, we know that all other parts of the plant are sacrificed, if necessary, to perfect the seed and provide for the reproduction of the species.

It may be asked, with reason, why, if the nutritious juices of the plants flow into the seeds, we may not save them by feeding the seeds? We must recollect that while a portion flows into the seeds, much of the sugar is converted into starch, and the starch converted into woody fiber, which is much less digestible than the substance from which it is formed. We must also bear in mind that grass seed, especially after they have been hardened, are difficult of digestion. All these facts go to show that grass is in its best condition for food when the plant has perfected its growth and before it has commenced that preliminary death which ensues when it begins to form seed for its own reproduction.—*Ex*.

Spade up the Fowl Runs.

and dig over the hen-house earth floors this month. The frost is well out of the ground now, even in shaded places. And where the increasing warmth of the sun is felt in the yards and runs of the confined fowls, the ground should be turned over thoroughly by spading—or light plowing—where the yards are more extensive in dimensions.

The advantages of this are two-fold: myriads of angle-worms, grubs, beetles, etc., are thus turned up to the light, and your poultry will not only quickly put them where they will do the most good, but the birds are very largely benefited by this means. Secondly—this spading freshens their floors and affords them a new footing for two or three weeks. The top soil, tainted from long use, is turned under, where it will be out of the way for future harm. Once a month during the summer, if your stock is still confined to the same limits, go through with this digging and spading process again. It will pay you, every time you do it.

Rake and pulverize the dry, gravelly ground in the warmest corners of your houses or runs (or both), where the fowls can enjoy the coveted dust-bath in the fresh earth. Sprinkling in such corners, in a warm day, a pound or two of powdered sulphur or carbolic powder, where it may be rubbed by them through their feathers. This is admirable as an aid in keeping them free from lice, and when the hot weather is approaching, and they will enjoy such a luxury immensely.—*Poultry Yard*.

Vermis of all kinds are very willing to move in with the first occupant of a new house; and rats and mice begin to build their new homes without asking leave. Carbolic powder or red pepper, or both, put in with the first coat of mortar will do much toward keeping these nuisances at a respectful distance. Clothes or paper rolled in powdered red pepper, and some filled with potash, will give a warmer salutation than they will find agreeable. If used plentifully in any spot where these agents can be employed, and if, after a mistress is established in a house, a suitable degree of watchfulness is maintained, we do not think there is danger of molestation from these intruders. But the carpenters, bricklayers, and plumbers must be responsible for the first and important step—namely, combining these safeguards with the mortar and plaster.

The Weekly Crop Review.

FROM THE DAILY CAPITAL OF JUNE 13.

Dickinson County:—Harvesting has now well begun. The prospect is very good although the grade will be somewhat lowered by the uneven ripening of the wheat. Old wheat selling at 90c for No. 3. Oats and spring wheat will likely prove a failure. Corn not damaged thus far, but will soon feel the want of rain. Dry and terribly hot.

Neosho County:—No rain the last three weeks; oats are suffering, and will be almost an entire failure; in this immediate neighborhood, wheat harvest is in full blast, and will be a medium yield of good quality. Although we have very dry weather, the corn is still growing in the bottom fields it is shoulder high; castor beans are likewise, still growing pretty well; early potatoes are full grown.

Clay County:—We had another young deluge last night, and the creeks are impassable, and the country is almost for miles in the bottom land. Our harvest has just commenced, and the quality of the wheat is unsurpassed, and the small percent of loss by the early drought is more than balanced by the superior quality of the grain.

Morris County:—Local showers around us with good prospects for some for ourselves. There may be a half crop of winter wheat here. Oats and spring wheat will be nothing. We have a good stand of corn, and it is generally worked well; looks good, never better. In view of the dry season, we hope the farmers will work their corn more; it will pay.

Woodson County:—Wheat never better, harvesting now. Oats short on account of drought. Corn, much larger acreage than ever before; is looking well but needs rain. Early potatoes are almost a perfect failure. Weather very warm and dry, with continued high winds, terminating every two or three days in a perfect hurricane.

Jackson County:—We had a good rain last night and there is a prospect of more to-day. Wheat harvest has commenced, wheat is well filled, but generally thin on the ground. The average yield will not be as much per acre as last year. Oats and spring wheat will hardly be tall enough to bind. Corn is looking fine and the ground is clear of weeds. The prospect is good for all kinds of crops except spring wheat and oats.

Wyandotte County:—We had a good rain Monday afternoon to refresh the thirsty earth, which did not do much damage. Farmers are busy harvesting. Wheat will average about a half crop. Excellent spring wheat. Hay will be a light crop; oats the same. Corn is looking well, considering the dry weather. Business outlook is good; more improvements being made this summer than for the past five years.

Farm Letters.

From Saline County.

This morning, while feeling good over the copious (not "splendid") showers of rain that are falling, and enjoying the comfortable reflection that I finished sowing my millet yesterday, and also that the growing wheat and corn are benefited. I took from its file one of my agreeable associates and companions, the FARMER of the 14th inst., and found among many other good things what I regard as a very correct and well timed article on "Capital and Agriculture." Epithets are not arguments and the most insincere can use them. It is not even good evidence of one's earnestness to employ them, and I regard the use of them, however, by denagogues, as a sad commentary on the intelligence of farmers in the case referred to in your article. Can farmers, and if they can, when will they rise superior to such clap-trap stuff? When will they cease being content with the shadow instead of the substance? I was brought up on a farm and then engaged in another business for fifteen years, and seven years ago resumed farming again, since which time I have observed as closely as I was capable of, and have labored in a very humble way and have looked on and commended the efforts of many who were able, and whose opportunities were greater, and who were earnest in their endeavors to "open a way that is brighter and better to the future of the farming class," and I confess that the advance appears to me to be slow, and it is not even steady but wavering. There seems to be some kind of disintegrating influence among farmers that prevents them from moving together. Can it be that their lack of capacity in this respect grows out of their lack of employment? To illustrate. A few zealous farmers in a county may spend their time and money endeavoring to enlist their brethren to co-operate with them in the support, at the polls it may be, of some measure for their mutual benefit, and some gentleman of the legal persuasion comes along that has no more sympathy in common with the farmer than a hawk has for a dove; and he destroys in a single night, that reforms are often slow in their inception and in their movements. Ours, it must be confessed, is exceedingly slow, and one great cause of it is very forcibly put by you in the article referred to, the lack of "self-education and discipline" on the part of the farmers. I have been disposed to think that there is no real antagonism between capital and labor, that is of necessity; but that the obstructions that do exist to the disadvantage of the producer is by reason of the superior discipline of the capitalist, which the producers are not qualified to counteract. But of this again. I had intended to say something of the crops in this county. The ground plowed last fall before it became dry, and sown to wheat early, will produce a fair crop. Late dry plowing, very light. Spring wheat, oats and barley almost a failure. Corn is yet looking well and it is a good time to kill weeds.

Atwood, Rawlins County, Kansas.

June 7th.—We (in Rawlins county) are situated in the north line of the state, with Cheyenne county between us and Colorado. The general surface is undulating; about 10 to 12 per cent. bottom, which is first-class; 4 to 6 per cent. forest, and the remainder prairie. The bottoms are not wide, but the high or plateau lands are extensive, not flat, but have graceful swells and "depressions" that give them the appearance of ocean waves.

Our timber is ash, which is long and slim and many trees 2½ feet in diameter, and stand close on the ground; for instance, Clerk Ward, of Maple Hill, Wabunsee county, has a quarter section, homestead land, that has fully

100 acres of fine timber; Capt. R. J. Stephenson, our sheep-raiser, of Wabunsee county, has fully 50 acres of timber on his quarter. The stone that crops out is abundant, but not good for all purposes, yet we have found on the land of Charles L. Vonberg, a Prussian, ten miles west of the center of the county, a quarry of extraordinary limestone, which is regarded as a good thing for this country. Mr. Vonberg has also discovered a five-foot vein of white emery sand, which can be used for polishing silver or brass vessels without leaving any indentations or marks, that may, in all probability, be of market value soon.

Not being a geologist, I am unable to use any terms in geology, but I say that in many places to be found slate and fire-clay, which leads old miners to the belief that coal can be found. Water plenty and good.

The county is settling rapidly, and will probably have 1,500 inhabitants by next winter. Atwood is situated at the confluence of the three Beaver creeks, in a beautiful location, and the town-site contains the best mill-power on the three streams; in fact it is the confluence that makes it so good. A man with a little means can do well to build a mill here as soon as grain can be raised.

The town has but few buildings yet. Lumber is being shipped from Kansas City to Grinnell, our shipping point, and will soon be on our town site, when a Topeka man will begin at once the erection of a hotel; another a store-room, a bakery, and one a dwelling. Four parties just left here for their homes in Nebraska, after securing lands and town lots, who are going to build, inside of sixty days, a stone-blacksmith and wagon shop, and a livery stable.

Mr. T. A. Andrews is our assistant-superintendent of public schools, and is so deeply interested in his work that he is determined to build a school-house, 18x30 feet, at his own expense.

Those coming here in search of homes, can do no better than to camp at Atwood, where they can get wood, well water, a large black oven and grasses, from which point they can radiate to all parts of the county.

It is the finest stock country I ever saw; no grain or hay required. Mr. McCoy holds thousands here that never tasted hay or corn. The "blue-stem" grass is fast taking hold on the bottoms.

Fuel will be had at low figures for many years, on account of the immense quantity of down-timber—the effect of fires for many years past, and being ash, it gets harder as it lays.

The stock men are generally "big-hearted," yet it hurts to be compelled to shove out of the best range in the whole northwestern country.

From Osage County.

June 10th.—The FARMER comes like a tried friend in a new suit, everything fresh and vigorous. May you reap a rich reward for the benefits bestowed on the agricultural population of this state and the country at large, for the Kansas FARMER has a national reputation.

We are receiving a liberal share of immigrants (white) in this part of the state, apparently men liberally supplied with brains and muscle, assisted by Scrip, or his brother of a more substantial nature.

We are delighted with our prospects of corn crops in this section; never saw a better average. Corn is king here this season.

Wheat crops considerably under an average. Oats will be very light. Rye, light. Castor beans comparatively a failure; a great deal of land that was planted in beans, plowed and planted in corn; still some have a good stand.

Potatoes look well. I broke some sod about two inches deep and planted potatoes every third furrow, and from present appearances they will be the best that I will have.

I have broken, this season, considerable sod from two to six inches in depth, which you shall hear of again. My experience, so far, is to break as light as possible, cutting everything clean and turning an unbroken furrow. The depth must be gauged by an even or uneven surface. Manure, well rotted, hauled out last fall and plowed under, will pay well for plowing this crop. Observe where fall and spring plowing were done in same field planted to corn, with otherwise equal cultivation, corn on fall plowing considerably larger and of a darker green color.

Patrons of Husbandry.

NATIONAL GRANGE.—Master: Samuel E. Adams, of Minnesota; Secretary: Wm. M. Ireland, Washington, D. C.; Treasurer: F. M. McDowell, Wayne, N. C. EXHIBITIVE COMMITTEE.—Hedley James, of Indiana; D. W. Aiken, of South Carolina; S. H. Ellis, of Ohio. KANSAS STATE GRANGE.—Master: Wm. Sims, Topeka, Shawnee county; Secretary: P. B. Maxson, Emporia, Lyon county; Treasurer: W. P. Pope, Topeka, Lyon county; Lecturer: J. H. Martin, Mound Creek, Miami county. EXECUTIVE COMMITTEE.—W. H. Jones, Holton, Jackson county; Levi Dumbauld, Hartford, Lyon county; J. S. Payne, Cadmus, Linn county. COUNTY DEPUTIES.—J. T. Stevens, Lawrence, Douglas county; T. B. Tyer, Beaty, Marshall county; R. Powell, Atwood, Butler county; C. E. Morse, St. Louis, Lincoln county; A. J. Pope, Wichita, Sedgewick county; A. P. Reardon, Jefferson Co., Post Office, Diamond, Leavenworth county; S. W. Day, Ottawa, Franklin county; G. A. Hovey, Belleville, Republic county; J. E. Barrett, Greenleaf, Washington county; W. W. Cone, Topeka, Shawnee county; J. C. McCombs, Holton, Jackson county; Charles Dismore, Clay Center, Clay county; Frank B. Smith, Rush county; R. H. Ewalt, Emporia, Lyon county; G. M. Summerville, McPherson county; J. S. Payne, Cadmus, Linn county; Charles Wyeth, Minneapolis, Ottawa county; F. M. Wiernam, Mildred, Morris county; John Andrews, Huron, Atchison county; George F. Jackson, Fredonia, Wilson county; D. C. Spurgeon, Leroy, Coffey county; James W. Williams, Peabody, Marion county; R. T. Ewalt, Great Bend, Barton county; C. S. Worley, Eureka, Greenwood county; James McCormick, Burr Oak, Jewell county; I. M. Earnest, Garnett, Anderson county; D. P. Clark, Kirwin, Phillips county; George Ball, Lawrence, Pawnee county; A. Huff, Salt City, Sumner county; James Faulkner, Iola, Allen county; W. J. Ellis, Miami county; George Amy, Glendale, Bourbon county; W. D. Livingston, Smith county; P. O. Kirwin, J. H. Chandler, Rose, Woodson county; E. F. Williams, Erie, Neosho county; J. O. Vanorsdel, Winfield, Cowley county; George W. Black, Olathe, Johnson county; W. J. Campbell, Red Stone, Cloud county; John Rehrig, Fairfax, Osage county; I. S. Fleck, Funker Hill, Russell county; J. K. Miller, Sterling, Rice county; W. D. Ripplie, Severance, Doniphan county; Arthur Sharp, Girard, Crawford county; P. B. Maxson, Emporia, Lyon county; A. M. G. Switzer, Hutchinson, Reno county; S. N. Wood, Cottonwood Falls, Chase county; G. S. Kneeland, Keene, Wabunsee county.

TO OFFICERS OF SUBORDINATE GRANGES.

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

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

Grange Picnics.

Pomona Grange, of Loudon county, Va., has "determined to hold a grange basket picnic some time during the last of July or first of August, to which the general public will be in-

vited, and at which we hope to have addresses from not only our own state master, but from the masters and other officers of the adjoining state granges."

This is a good movement on the part of the Virginia grange, and worthy of imitation by other granges.

Education of Farmers a Work for Farmers to Accomplish.

[From an Address by Dr. W. M. Ellis before a Missouri Grange.]

Some will say the grange has failed to accomplish its most desirable purposes; when they have not lifted a finger to further its wishes! And others who say that whenever they find the grange has accomplished these great ends, that they will become members, too; but that they will wait until they can see that the grange has done so first? Why, this is one of the most stupendous works ever prompted by man, the complete education of farmers to the standard of any other class. Can we, as western farmers, not recollect the many times we have visited a house-raising, when all the help around was needed to raise the edifice? What would the men say then about a man who would stand off and say, when he saw others straining every muscle to raise the logs to the desired points, "Those fellows make a very little show towards getting up that house, but if they can accomplish it without my help, then I will go in and enjoy the fruits of their labor; and, in after years, will take upon myself the credit of being here when the house was raised." This job of educating farmers is too stupendous to permit any to stand off and talk about the laborers not doing their duty, when the undertaking is too large for the few who are at work. It is true, a few persons can do a large job by having sufficient time to do it, but how much quicker it can be done where all join in the work.

Suppose all in our neighborhood felt that the most laudable thing they could be employed in was the improvement of their fellow farmers' and all would enter into the employment heartily with this praiseworthy object in view, how long would it be before we could see the vast amount of information gained, showing itself unmistakably, and if this would be so praiseworthy in our vicinity, what would it be where we take in, not only the confines of our own state but that of the United States—aye, of the whole world? To see a world of farmers teaching and learning would be a glorious sight with most glorious fruit—continual education in those regions least infested by temptation, man progressing in knowledge as he advances in age until the sickle of time would sweep him from the scene of terrestrial learning. How long will our farmers stand aloof from the good cause? How long will they complain of the grange and do nothing themselves? How long will they look on a few toiling grangers, and let their fellow farmers live and die in ignorance? How long will they let a few grangers do much good, and not have the satisfaction of knowing that they had lent a helping hand? The conduct of farmers reminds me of those who complain of the little good that the church is doing; and of God's cause trailing in the dust, when they have not even done so much as to attach their names as members, thereby showing that they desire His cause to prosper above everything else.

Until we can devise some better plan to elevate the farming class, all should enter the fold of the grange, and push forward the glorious work, and not feel satisfied as long as they know that they are doing nothing to better their fellow creatures.

I suppose we cannot find a farmer who will not say, that if the object I have tried so hard to picture, could be consummated, that it would meet with his co-operation and approval. Then, how can it be done effectually without the co-operation of all? I know that a few can do much good, and a greater number, more good; but it takes all to do the most good.

Useful Maxims and Safe Counsel.

Attend to your own business first. If you would not lend do not borrow. Ten hours labor, daily, and two hours devoted to reading and meditation will accomplish more than fourteen hours' labor. Wealth without intelligence is not worth having. Nothing yields so large a net profit on its cost, as true politeness. If the child is so instructed that he is truly kind, nothing will tend more to make him honest. Always live within your means, and you are always surrounded with means. The judicious farmer will drive his work, that it may not drive him. The farmer who gives his wife green wood, cut daily, for cooking, will be very likely to give somebody a mortgage. Lean animals require more food than fleshy ones, and are often ready, but never fit to die. Good crops and perfect animals cannot be produced from poor seed and imperfect ancestors. "Like produces like." An animal well wintered is half summered. It is cheaper and easier to maintain a vigorous physical condition, than to produce it. Plow no more than you can plow and cultivate well, and manure liberally. Avoid plowing steep lands. Judicious irrigation may be made to quadruple production. Interval lands, needing draining, are generally more productive when drained than higher land. In the selection of a farm, avoid large streams, and seek an abundance of perennial springs.—Prof. Wilkinson.

Advertisements.

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

A GOOD PLAN.

Anyone can learn to make money rapidly operating in stock by the "two merrill rules for success," in Messrs. Lawrence & Co.'s new circular. The combination method, which this firm has made so successful, enables people with large or small means to reap all the benefits of largest capital and best skill. Thousands of orders in various sums, are pooled into one vast amount, and co-operated as a mighty whole, thus securing to each shareholder all the advantages of the largest operator. Immense profits are divided monthly. Any amount from \$5 to \$5,000, or more can be used successfully. N. Y. *Expedient Weekly*, September 26, 1878, says: "By the combination system \$15 would make \$75, or 5 per cent.; \$50 pays \$350, or 7 per cent.; \$100 makes \$1,000, or 10 per cent. on the stock during the month, according to the market." *Frontier* (London) *News*, June 29th: "The combination method of operating stocks is the most successful ever adopted." *New York Independent*, Sept. 12th: "The combination system is founded upon correct business principles, and no person need be without an income while it is kept working by Messrs. Lawrence & Co." *Brooklyn Journal*, April 23rd: "Our editor made a net profit of \$101.25 from \$20 in one of our (mailed free) explains everything. Stocks and bonds wanted. Government bonds supplied. Lawrence & Co., Bankers, 57 Exchange Place, N. Y."

Shannon Hill Stock Farm

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

High Grade Cattle

For Sale. 25 head of very superior high-grade short-horns, all young cows, with 10 calves. Address: J. C. STONE JR., Leavenworth, Kan.

Apple Trees,

Hedge Plants, Grape Vines, Evergreens, and a general line of Nursery Stock at wholesale and retail. Order direct and save commissions. Price List, Free. KELSEY & CO., Vineland Nursery, St. Joseph, Mo.

FRUIT TREES!

Parties in Kansas who wish reliable Fruit Trees adapted to the climate of Kansas will get them in condition to grow by ordering of me direct. Also, Maple, Elms, Box Elder, Green Ash, and Catalpa of small size, cheap, for Groves and Timber. Also Evergreens of all sizes of the best possible quality. All the greens of all sizes of the best possible quality. Address D. B. WIER, Leavenworth, Kan.

Western Missouri

NURSERIES,

LEE'S SUMMIT, JACKSON CO., MISSOURI.

(20 miles east of Kansas City, on the Mo. Pacific R. R.) These Nurseries are very extensive and all stock young and thrifty. We call the special attention of

DEALERS AND NURSERYMEN

to our superior stock for full delivery of 200,000 Apple trees two years old, 4 to 6 feet high; 50,000 Peach with Pear, Plum and Cherry, grapes and small fruits for the wholesale trade.

With our system we can fit out Dealers promptly and on time. Wholesale prices will be printed by June. We desire every one wanting Nursery stock at the lowest prices to call and see us, or send for prices before purchasing elsewhere. All stock will be boxed if desired.

James A. Bayles,

Prop'r.

Scott's Improved Sheep Dip.

Has been thoroughly tested for the last two years. We know that it will cure scab, and kill all insects that infest sheep. We are prepared to furnish customers with it on reasonable terms. Apply to A. Scott, Westmoreland, Pottawatomie Co., Kansas.

Berkshire Hogs,

My herd now numbers over 40 breeding sows and 3 boars. A good part of the sows are prize winners at the leading shows in this country. Canada and England and are all select animals of fine quality, representing the best families of Berkshires living. I have paid higher prices than any other Western breeder. My herd has won more premiums than any other in the West. I was the grand Sweepstakes prize at the Kansas City Fair for best collection of hogs of any breed, against the largest show that was ever there. The boars in use now are Lord Liverpool, 221; Brit's Sovereign, 588; and Conqueror, 233. The first was a prize winner at the leading shows in England and Canada; the second was never beaten in his class and won the first prize this year at the great St. Louis Exposition. The third won the grand Sweepstakes award on all breeds at Kansas City in 1875 and at St. Louis in 1878. I have now on hand a fine lot of Berkshires of all ages for sale at reasonable prices. Incoming young pigs just weaned in pairs not related, young boars ready for service, and sows safe in farrow. I ship nothing but first-class animals, and guarantee satisfaction in all cases. I have reduced rates for shipping by express. Send for new catalogue just out, to all, and for prices or any other information. Address N. H. GENTRY "Wood Dale Farm," Sedalia, Missouri.

The FEARLESS.

Stands unequalled for ease of team, the Horse-Drawn run, as shown by the records, with more than one-third less friction than any other. The only machine so tested.

CENTENNIAL MEDAL

on both Horse-Drawn and Thresher and Reaper, at the Centennial Exhibition, as shown by Official Report, which says: "For special features in the Power to secure light running and minimum friction, for the ingenious form of the Straw Shakers, which insure the proper agitation to separate the grain from the straw." For Catalogue, Price-List, and full report of trial, address: RICHARD HARTER, Cobleskill, Schoharie Co., N. Y.

SAM JEWETT,

Breeder of registered AMERICAN MERINO Sheep. Constitution, density of fleece, length of staple and heavy fleece. All animals ordered by letter guaranteed satisfactory to purchaser. Correspondence and examination of flock solicited. Saml Jewett, Independence, Mo.

Breeder's Directory.

L. H. WATTS, Dover, Shawnee Co., Mo., breeder of Pure Short-Horn Cattle, and Berkshire Pigs. C. S. EICHOLTZ, Breeder of Short-Horns, Berkshires and Bronze Turkeys, Wichita, Kansas. J. FRY, Dover, Shawnee Co., Kansas, breeder of the best strains of Imported English Berkshire Hogs. A few choice Pigs for sale. Prices Low. Correspondence solicited.

D. R. W. H. H. CUSDIFF, Pleasant Hill, Cass Co., Mo., breeder of thoroughbred Short-Horn Cattle of fashionable strains. The bull at the head of the herd weighs 300 pounds. Choice bulls and heifers for sale. Correspondence solicited.

H. ALL BROS., Ann Arbor, Mich., make a specialty of breeding the choicest strains of Poland-Ch Suffolk, Essex and Berkshire Pigs. Present prices less than last card rates. Satisfaction guaranteed. A few splendid pigs, jills and boars now ready.

Nurserymen's Directory.

LEE'S SUMMIT AND BELTON NURSERIES, Fruit Trees of the best, and cheapest. Apple Trees and Hedge Plants a specialty. Address ROBT. WATSON, Lee's Summit, Jackson Co., Mo.

A. WHITCOMB, Florist, Lawrence, Kansas. Catalogue of Greenhouse and Budding Plants sent free.

MIAMI COUNTY NURSERIES, 11th year, large stock, good assortment; stock first class, Osage hedge plants and Apple trees at lowest rates by car load. Wholesale and retail prices lists sent free on application. E. F. CADWALLADER, Louisville, Ky.

Physician.

MRS. DEBORA K. LONGSHORE, M. D., has removed her office to the west side of Harrison St., 1st door south of Sixth St.

Dentist.

A. H. THOMPSON, D. D. S., Operative and Surgeon Dentist, No. 180 Kansas Avenue, Topeka, Kansas.

TEETH extracted without pain, by Nitrous Oxide gas, or laughing gas, at DR. STULTZ Dental Rooms, over Funk's Clothing Store, Topeka, Kansas.

Durham Park Herds

ALBERT CRANE, BREEDER OF

Short-Horn Cattle

Berkshire Pigs,

Durham Park, Marion Co., Kansas.

Catalogues free. The largest and best herds in the west. Over 200 head of cattle, and a like number of pigs. Prices Low. Address letters to DURHAM PARK, Marion County, Kansas.

GEO. M. CHASE,

KANSAS CITY, MISSOURI, BREEDER OF

Thoroughbred English

Berkshire Pigs.

—ALSO—

Dark Brahma and White Leghorn Chickens.

None but first-class stock shipped.

WOOL-GROWERS

Can rely upon immunity from contagious disease in their flocks after use of LADD'S TIGER SOAP WASH. GUARANTEED an immediate cure for scab and prevention of infection by that terror to flock-masters. GUARANTEED to more than repay the cost of application by increased growth of wool. GUARANTEED to improve the texture of the fleece instead of injury to it as is the result of the use of other compounds. GUARANTEED to destroy vermin on the animal and prevent a return. GUARANTEED to be the most effective, cheap and safe remedy ever offered to American Wool-growers. No flock-master should be without it. I have the most undoubted testimonials corroborative of above. Send for circular and address orders to W. M. LADD, 21 N. Main St., St. Louis, Mo.

GREAT

Cattle Sale.

—OF—

THOROUGHbred SHORT-HORNS.

The Stock breeders of Jackson county, and H. S. Grimes of Cass county, Mo., will sell in

KANSAS CITY, MAY 24, 1879,

About 50 thoroughbred cattle, and about 30 high grades, consisting of bulls and heifers, mostly Bulls.

This stock has, in almost every instance, been bred by the person offering it for sale. While our number is not large.

Our Stock is of Superior Quality.

TERMS OF SALE—Cash, or four month's satisfactory paper will be received.

Catalogues ready May 10th, 1879.

A. J. POWELL, Cor. See.

Independence, Mo.

Hereford Bulls

For Sale.

Fine Thoroughbred Hereford Bulls; pedigrees guaranteed. These Bulls are all superior animals and were bred from imported stock. Ages, one, two and three years. Also two thoroughbred Durham Bulls. Call on or address

JACKSON & WARREN,

Maple Hill, Wabunsee County, Kansas.

20 miles west of Topeka.

THE GIBBS

SELF-REGULATING SEPARATOR. This separator has all the latest improvements, and is noted for its light movement when in operation, also for separating and cleaning all kinds of grain. Built in five sizes, from 25 to 35 in. cylinder, and trunk from 35 in. to 50 in. wide, and horse power to correspond, or we furnish either size for steam power. THE GIBBS SEPARATOR, Franklin Co., Pa.

THE KANSAS FARMER.

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

TERMS: CASH IN ADVANCE.

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One Copy, Weekly, for six months.	1.50
One Copy, Weekly, for three months.	1.00
Three Copies, Weekly, for one year.	5.00
Five Copies, Weekly, for one year.	8.00
Ten Copies, Weekly, for one year.	15.00

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One insertion, per line (nonparel) 20 cents.	
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The greatest care is used to prevent swindling humbugs securing space in these advertising columns. Advertisements of lotteries, whisky bitters, and quack doctors are not received. We accept advertisements only for cash, cannot give space and take pay in trade of any kind. This is business, and it is a just and equitable rule adhered to in the publication of THE FARMER.

TO SUBSCRIBERS.

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

The Economic Condition of the Farmer.

On our first page we publish an article from the New York Bulletin, under the caption of "The Railroads, and Middle States Farming," which presents a discouraging picture of agriculture in those formerly wealthy and progressive agricultural states. The writer attributes the state of affairs depicted, to the extortionate rates for freights of farm produce in the states whose condition is under review, and the ruinously low rates granted the western farmer. Western farmers, on the other hand, are crying out against railroads and their heavy tolls, which rob them of their hard earnings. It does not seem possible that both can be right, and yet their complaints are measurably just.

No western farmer ships a bushel of grain or pound of beef to the Atlantic ports. The farm produce of the entire west is sent to Chicago, St. Louis, Kansas City, and other "centers," where it is collected into extensive warehouses or elevators, and stock-yards. The farmer has no interest in this produce after it leaves his nearest railroad station. The agent of the great "operator," whose headquarters and collecting depots are in the large cities, buys the produce on the farm or at the farmer's most convenient railroad station, and it is forwarded to headquarters—the large city. There through-rates are quietly fixed with the heavy operating middle-men. What those rates are none outside of the interested few ever know. A chronic quarrel is always on hand between the rivals who gather up the millions of tons of produce to ship east, on account of clandestine attempts on their part to get freights through at less than the published rates. From a Chicago paper of recent date, we clip the following item, which shows the animus of these gladiators:

"A very bitter fight has been going on the past few weeks between the rival railroads eastward for freights, etc., which has been of immense advantage to shippers and producers. So desperate did it become about a week ago that shippers could get their own terms. As a sample, flour can be shipped to New York as low as 8c per barrel, and live-stock \$15 per car, and other freights proportionately low."

This transportation warfare is as ruinous to the trade of a country as the conflicts between contending armies, which march and counter-march, and contend for the mastery, over a territory.

"The farmers of New England and New York," says an eastern paper, referring to the article republished on our first page, "have just reason for complaint: at the discrimination made against them by the great railway lines, in rates of transportation, and in favor of the great farming regions of the west. It is a notorious fact that a barrel of flour can be freighted from St. Louis or Chicago to Boston, for fifteen cents; while the rates from Berkshire county in this state, or from almost any railway station in Vermont, would be at least fifty cents per barrel. Western railways, in connection with their eastern allies, are making contracts for the delivery of meats from Chicago to Liverpool, at the rate of thirty-four cents per one hundred pounds, or at less cost than the average New York State or New England farmer can send his pork, mutton or beef to New York or Boston market. Western corn has recently been transported from Illinois to the seaboard at six to seven cents per bushel, a much lower rate than could be secured between Albany and Boston. A car load of dairy products can be freighted from Chicago to Boston at nearly half the charges exacted between St. Albans, Vt., and the latter market."

The mistake made by this New England paper is in supposing that these discriminations are made in the interest of the western farmer. He does not enjoy any of the advantages of those low freights. His grain is in the hands of a class of middle-men who are so closely allied with the railroad companies, in most instances, as to be unrecognizable from them. They either control an influencing share of the railroad stocks, or divide the profits with officers or owners of these powerful railroad lines. By well devised combinations the produce of western farmers is drawn into the hands of those monopolies at prices that will barely pay the western farmer's expenses for cultivation, and all intermediate territory east of the western depots of the great trunk lines, has a ruinous transportation tax levied upon it, which cripples the farmers and drives them from producing those staples of the farm which would aid in swelling the bulk of the articles which these powerful combinations trade in.

If the picture be true which is drawn by the writer of the article from the Bulletin, reproduced on the first page of the FARMER, the farmers of the eastern states are beginning to approach the condition which is found matured

in India—an effeminate, imbecile rural population, perishing with famine in seasons unfavorable for crops; cared for as paupers by the government. These people have been reduced to their present unenviable state by causes similar in their effects to those which are at work in this country. All burthens of taxation have been piled on non-resisting agriculture, which is powerless and despised in its isolation.

It has been the work of centuries under despotisms, followed by the despoiling system of the British government, to keep up her aristocracy, which has reduced the old Asiatic countries to their present condition.

The remedy for this evil is two-fold—the opening of the Mississippi and its tributaries as safe and convenient tributaries to the ocean, and a thorough adjustment of the entire railroad system of the country under a code of laws founded in equity. The theory of vested rights which monopolies so often trench themselves behind, is not essentially different from that stupendous iniquity, the "Divine Right of Kings," by which the millions were robbed and brutalized through the centuries, by the few.

The same causes which are at work in this country, to-day, under different phases, have preyed upon agriculture, in all ages of the world, because agriculture has never been organized and properly educated, and because its wealth can never be concealed. The history of the past will be repeated—it is being repeated under conditions somewhat changed to suit the age and business of the present time—in this country, unless the agricultural class is organized and enlightened. There is no time to lose. The case is urgent, and is more important than a knowledge how to grow crops and stock, as indispensable as the latter may be.

Systematized Labor Applied to Farming.

Classified labor is the road to cheap production without lower wages or less profit, because skilled hands perform more of one class of work, while no time is lost in frequent changes from one thing to another. Farmers must strive to imitate other industries in this system of economic labor. Where it has been introduced in manufacturing the quality of the product has been vastly improved and the quantity greatly increased at a minimum cost.

Labor saving machinery has been largely adopted by farmers of the United States, but the diminished cost of production has not accompanied this change in the husbandman's tools. The farmer of the present day can accomplish considerably more work in the same time, and with less strain on his muscles, possibly, than his ancestors, but his annual outlay in proportion to his income has not been diminished, but in many instances, if a series of years is taken together, we fear, will be found to have increased. This result is owing to the increased cost, and variety of machinery and implements which have been introduced on the farm, over the old style of tools, which the fathers and grand fathers of the present generation worked with.

The cost of farm implements in use at the present time are five hundred to a thousand percent greater than the old style of utensils, when their destructible nature is included with their original cost. Much of the modern farm machinery is large and finely finished, and speedily goes to ruin if not carefully housed and protected from the weather when not in use; or if not properly oiled and carefully watched while in use the same result follows.

These aggregate losses tell very heavily on the farmer's income at the present time, while the increase of his crops over the more primitive mode of cultivation has not nearly been in an equal ratio. Economy in expenses has not kept pace with improvements in labor-saving implements on the farm; but rather the reverse is true.

If the improved implements and machinery were worked to their full capacity and only those pieces best adapted for the crops raised, the texture and configuration of the land, purchased, a saving of two thirds on original cost could doubtless be made; and if the tools of the farm were under the supervision of competent men while in use and carefully cleaned and housed when out of use, the time of their duration would doubtless be doubled. These are neglected economies that run away with millions which should be placed on the profit side of the farmer's balance sheet. Here is an immense field of waste in agriculture to be improved, which if properly utilized would doubtless amount annually to a sum as large as the entire public debt of the government. This, at first may seem like a large estimate, but a little reflection must convince every well informed farmer that it is a very reasonable one.

To effect this saving, however, involves a radical change in our system of farming. An amount of muscle is expended on agriculture, entirely disproportionate to that of well directed thought. There are many pairs of hands in the world to each well informed, administrative mind. If every score or dozen pairs of strong and willing arms could be directed by one competent brain, the profits to be divided among the whole would be greatly increased for each one. Farmers like every other class of men, cannot all, individually think for themselves to the best advantage.

These results are what co-operation in its more advanced stage promises to achieve. When communities of farmers become impressed by the fact that the struggle individually against well organized systems in other departments of labor, and the multitude of hardships which beset them, is a hopeless struggle, they will resolve to divide their labors and choose the best brains among them to direct the whole.

The thinking men among farmers must control those who are unwilling or incapable of thinking for themselves by convincing them that their interests are mutual, and drawing them into organizations. The waste of misdirected labor in farming is astounding when properly considered. There is waste in all departments and on every hand which organized system and intelligent direction would in a large measure prevent. The possibilities of agriculture under system, organization, mutual aid and intelligent direction are so vast, when compared with its achievements of to-day, that when contemplated they rise to the sublime.

The Kitchen Garden and the Farmer's Table.

Farmers use comparatively few vegetables, when their facilities for acquiring an abundance, and at a trifling cost, is considered.

Potatoes are a standard vegetable. Cabbage, too, boiled, is liberally patronized by some. Beets, beans, parsnips and onions occupy the third place, and are familiar in farm houses generally. Nearly all other kinds of vegetables are either wholly unknown or but rarely found on the tables of farmers. Boiling is the manner of cooking those mostly in use, and the best and most approved modes of preparing and serving vegetables, by which they are rendered most palatable, wholesome and nutritious, are almost wholly unknown to farmer's families. From this lack of knowledge of the manner of preparing vegetable food, this part of the farmer's cuisine is greatly curtailed, when we consider what it might be if all the resources most easily attainable were used.

Bacon is the chief substitute, the "stand-by" of the majority of farmers, which being chiefly composed of fat, is unwholesome, comparatively innutritious and unsavory, satisfying only the grossest appetites. That desirable variety to the table is greatly curtailed in the majority of farm houses, on account of the neglect of the vegetable garden, and a lack of the knowledge and skill in cooking to make use of and serve in the most acceptable and appetizing manner, the wealth of wholesome vegetable food which may be made to run through the entire year.

Fruits, green, dried and otherwise prepared, are much neglected by farmers as an excellent article of standard food. Nothing is more wholesome and nutritious than ripe fruits, both in their green and preserved state.

It is the fashion with a certain class of would-be exponents of the laws of health, and diet doctors, to hold up all manner of pies as standing at the head of disease-provoking food, while theory and experience point directly the opposite way. We believe there is no dish more wholesome than properly prepared fruit pies. Fruit acid, taken with other food, is one of the best promoters of digestion. Fruit baked between crusts has all its aroma and rich juices preserved, and what is pronounced "sad" and indigestible undercrust, by this school of theorists, is in fact well-cooked bread permeated by the wholesome juices of the fruit, and made the most tender and digestible part of the dish. The "shortening" of the crust is pronounced most unwholesome. If crust or pastry is properly made, it is a light, shelly bread, containing a small quantity of sweet lard. What composes its unwholesomeness? The best slice of ham or beefsteak that is served up, praised and eaten with so much gusto, contains more grease than the most generous slice of pie. Puddings and pies, especially when largely composed of fruits, are among the most wholesome, economical and appetizing dishes that grace the table, and the sooner the standard fat bacon diet is largely superseded by a more varied vegetable diet, the more healthy and contented will be the rural population. Not one-half the quantity of vegetables and fruit is used in country families that is consumed in those of towns, although the farmer could have them in all their freshness and superior excellence. The reason mainly is that the mode of preparing heavy, boiled dinners on the farm becomes habitual, and a kind of routine cookery obtains, which soon excludes all the more delicate dishes which require more careful preparation. This may be accounted for in a great measure by the amount of work which falls to the lot of the farmer's wife to do or look after, with but limited assistance. It would pay many farmers to employ a man or stout boy to assist with the labor in the house where efficient female help cannot be obtained.

Much more might be said on this subject, but we have not space more than to refer to and notice some of its most prominent features.

Harvest.

The wheat harvest commenced last week in eastern Kansas and fields of wheat that were seeded early in the fall, the ground having been put in proper order, will yield well and the grain is of good quality.

Jersey Stock.

We have inquiries for Jersey stock, which should be hint enough to business men who have that stock for sale.

The Canadians expect within a few years to complete a water way to the west through the valley of the St. Lawrence, which will enable ocean steamships to load grain and cattle at the docks of Chicago.

An English Agriculturist has for years prevented the destruction of birds in his gardens and fields, and gives fowls the range of his small fruit orchards, which aid materially in keeping them clear of curculio, canker worms, current grubs, borers and other insect pests.

Soor is valuable, not only as a manure, but to drive away insects that attack your cabbage, turnip, radish and other plants. It is one of the most valuable substances the gardener can employ.

Horse racing at agricultural fairs holds about the same relation to the fair as a lottery does to the legitimate business of a community. The former is tolerated under the plea of assisting the fair; the latter on the pretext of aiding some useful or beneficial enterprise.

The Weekly Capital.

July 1st, as heretofore advertised, we begin the publication of the WEEKLY CAPITAL, a first-class family newspaper, giving latest telegraphic news from all parts of the world, state news, news of the cities of the state, and local news from the capital. It will be full and complete in all its departments, bright, newsy, and entertaining. It will be sent from July 1st to January 1st 1880, for fifty cents. One year for One dollar. Address Hudson & Ewing, Topeka, Kansas.

A Dictionary of London.

We have received from the publishers, Macmillan & Co., 22 Bond street, New York, a marvelous little volume, containing 300 pages. This curious book is edited by Charles Dickens. It is full of interest to the general reader, who never expects to see the great city, but to all visitors we should think it indispensable.

Large Sale of Champion Reapers.

The firm of Kennedy & Stone gave a dinner at the Fifth Avenue, to-day, to those of their patrons who have purchased the "Champion" reaper. It was their intention to have a procession of reapers, led by the Topeka Cornet band, but so many of the machines have been called for, owing to the fact that harvesting has been begun sooner than they anticipated, that they dispensed with that part of the programme. Up to noon to-day this firm had sold forty-nine "Champion" reapers this season. They have delivered about twenty of that number this week. This speaks well for wheat prospects in this vicinity, for the "Champion," and for the firm above mentioned.—Topeka Capital, June 14th.

The British Embargo.

The repeal of the exemption from slaughter and quarantine, permitted up to March to the cattle of the United States, under the British Contagious Disease Act, has wrought a serious check to exportation. The trade was expanding with great rapidity, and promised still greater extension for stock purposes up to 1877, when 4,991 animals were exported, there was a jump in the following fiscal year, ending last June, to 23,985 sent to England, and 997 to Scotland. What was begun so auspiciously continued with accelerated movement, so that up to April 1, of this year, 49,352 were sent to England, and 2,924 to Scotland, as the contribution of the preceding nine months. But the change wrought by the order for compulsory slaughter or landing, has been a disastrous check to the live cattle trade, as the following statement of exports to England, shows:

1878.—January, —; February, 518, \$49,100; March, 1,379, \$130,375.

1879.—January, 3,607, \$344,136; February, 3,796, \$362,679; March, 1,358, \$154,130.

Instead of a three-fold increase in March, the relative proportions of February and March exports were reversed. The objections to compulsory slaughter on arrival in England, are thus summarized by the Kentucky Live-Stock Record:

"The advantage of the live cattle trade is that when the cattle are landed in Great Britain they can be held for a market, can be pastured and improved. During the past year very many cattle arriving in that country were bought by graziers and carried on for some weeks; the markets watched and the most favorable time for sales seized. On the other hand when dead meat arrives in England it must go at once on the market. It cannot be held. A glut at once carries down prices and losses are incurred. Beside, the offal (hide, tallow, etc.) of the live beast is worth enough more in England than in this country to pay all the freight of the animal to England. The traffic is perfectly safe in summer and has this winter not proved dangerous, very few cattle having been lost, though it has proved a very stormy one at sea."

Junction City, Davis County.

June 12th.—I believe it to be our duty when we have found any thing valuable, to let it be known, that others may have the benefit. For the past two summers we have been troubled in getting our butter to come all at once. We have churned sometimes three or four times, and would get some butter every time. I even wrote an inquiry to your paper (which you published) asking for information, and if any one else had been perplexed in the same way, but never saw any reply. An old lady was visiting us this spring, and she said if we were troubled in this way again, to take a piece of ice and put it in the cream before commencing to churn; that it acted the same as warm water in cold weather. We have done so, and it is a fact. We have used it twice, and got fourteen pounds of butter from the same quantity of cream that the week before only gave us ten pounds without the ice.

Since finding out the above, and also having the soaking rain this afternoon, that was so much needed, I sign myself—

A KANSAN CONTENT.

When butter will not all "come" at the same time that is in the cream, scientists tell us that it is owing to sweet and sour cream being placed in the churn together. See that all the cream has acquired the same degree of acidity before churning, and the butter will all appear at the same time. Cream, when churned at a temperature above 62°, is too warm, and part of the butter is destroyed. The old lady's ice recipe serves in place of a properly tempered dairy room.

UNTIL

January 1st.

FOR 50 CENTS.

We offer our readers a first class weekly newspaper from

July 1st. to January 1st, 1880.

FOR 50 CENTS.

—THE—

Weekly Capital

Will be a complete family newspaper published at the low price of

One Dollar Per Year.

Every farmer in Kansas wants a newspaper published at the Capital of the State. It will give the latest telegraphic news from all over the world, full state news, news from the cities of the state and a splendid miscellany of useful, interesting, and humorous reading matter. It will be the

BRIGHTEST, BEST,

AND CHEAPEST

Paper in Kansas.

A fit companion for the reliable old Farmer. Send in your name at once and begin the first issue July 1st.

TERMS:

Cash in Advance.

1 year to any address, \$1.00. Postage paid, from July 1st to January 1st, 1880, 50 cents.

Sample copy of daily or weekly, (after July 1st) sent free to any address.

The reading matter of the FARMER and the WEEKLY CAPITAL is entirely distinct and different. That printed in the CAPITAL will not be put into the FARMER. The one is an Agricultural paper, and the other a Newspaper. The two will give every farmer's family a splendid combination at a price within the reach of all. Send money at our risk by post-office money order, registered letter, or enclose 17 three cent postage stamps.

—ADDRESS—

Hudson & Ewing,

Editors and Proprietors,

TOPEKA, : : KANSAS.

Literary and Domestic.

June.

The blackberry bush is a bride to-day,
For she wears a bridal wreath,
And the petals fall from her snowy crown
On the grass flowers nursed beneath.

There are crowds of daisies everywhere,
And always beside them the clovers;
So faithful the pink blossom is to the white
They surely are pledged to be lovers.

The violet, under the dark green leaf,
Has gone to sleep and to dreaming,
If flowers—and maidens—would tell their dreams,
Why, who would care for their seeming?

From the high cool sides of the sheltered rock
Falls a wreath of wild grape-vine,
But the fairy fingers of slender stems
Have swung their last columbine.

Not long ago, in early grass,
Nodded the dandelions
But the summer silvered, her yellow locks,
And zephyrs set them flying.

For the first green, sweetness is out of the world,
And the first bloom of the flowers;
And a first farewell has silently come
From the vanishing woodland flower.

"Farewell," said the wind flower as it passed,
And the crocus nodded a "good-day";
And the eye-brights laughed and called good-bye,
As they chased each other away.

"Farewell, farewell," sang the chorus of
Sweet things, as the spring went "bye,"
And the fruit trees dropping their fragrant blooms,
Whispered many a soft "good-bye."

But this is a parting that has no pain,
A loss that is not of death;
For strong and green is the tree, and more sweet
Than blossom of the young fruit's breath.

Strong and green are the hedges grown,
And the blackberry decked as a bride,
While the strawberry and the dewberry rock
Their little ones aside by side.

There's a deep, deep shade in the heart of the woods
That shuts out the summer sun;
There's a deep, deep rest in the heart of the plant;
For the hope of the spring is won.

Oh, come if you love the later flowers
Where the meadow grass is tall,
And find where the pale pure primrose grows,
The dearest one of them all.

Lost.

BY M. W. K.

CHAPTER II.—CONTINUED.

His delight with the freedom and beauty of the west, and a desire to take in a share in forming the laws and institutions of a new state, induced him to become an actual settler. Returning to the east only to infect every member of his father's family with his enthusiasm, the result is already apparent to the reader.

"Why, Miss Ellen! you surely do not propose walking home in this storm," said the young man.

"Yes indeed I do. Why shouldn't I?" was Ellen's reply as she glanced slyly into his face, while his eyes were saying what his lips dare not utter just then, and hers fell beneath a gaze that thrilled her very soul.

"Ellen," he said, and his voice grew soft and persuasive, "Ellie, dear, don't go," taking a small basket from her hand as he spoke, "I will take you home to-night. I would leave my work and take you now, if I had not promised to help Mr. Kline finish his house, he needs it so badly."

"Robert, this is nonsense. I can get home well enough, so don't worry about me; keep your engagements, and—"

"Will you keep yours?" interrupted Robert, in a low, expressive voice. Ellen looked up, nodded her head emphatically, as the quick, warm flush crimsoned her cheek and brow and said gravely:

"Yes, Robert, you know I will; and now you keep yours with Mr. Kline, and trust me, I shall get home all right. But to do it I must walk faster than I have for the last few minutes" (for as they talked they advanced slowly up the winding road towards the summit of the hill), "so give me my basket, for I must lose no time."

"I can scarce let you go without me, Ellen. I feel strangely fearful of mishap to my newly found treasure; but my word is out; I must keep it. So little girl, be careful of yourself, and don't leave the road until you are in sight of home, for there is much danger of getting lost, such a day as this, if once off the beaten track. You will be careful, darling, won't you?"

As Ellen turned to leave him she held out her hand, which he took, and drawing her to him impressed upon her brow his first kiss, and holding her hand to detain her, said hastily:

"I cannot let you go. Wait, I will"—but ere the sentence was completed Ellen, with one shy glance into his earnest eyes, drew her hand resolutely from his grasp and sped up the space that intervened between him and the summit of the hill.

Robert watched her until she gained that point where she paused to throw over her head a scarlet shawl that lay around her shoulders—as she unlocked it a blast of wind caught its gay folds and waved them to and fro. As Robert's eyes caught the gleam of color as it flung in the murky air, it seemed a beacon of light and hope. As she disappeared from his view he turned hastily and soon his hands were busy with the implements of his trade, while his whole being thrilled with a solemn joy as he realized that a soul had been committed to his keeping—that the weal or woe of life was in his hands.

Ellen Doane could scarce be called beautiful, but the sunshine in her heart played over the face, giving it that loveliness which comes from a pure soul, and a spirit at peace with itself and the world. This constitutes beauty more truly than the most regular of features and the finest of complexions.

She was, as a friend once said, "One of those who would, like wine, perfect by age, and at thirty, or even forty, when her mind was fully developed, be positively beautiful."

What Robert Moreton thought of her face I

know not, but this I know: *he loved her*, and knew, that dear November day, that she had promised to be his wife, and so the earth for him too, was glorified.

CHAPTER III.

On the following morning the snow had ceased falling but the clouds were low and heavy, and the wind swept in fitful gusts, whirling the new fallen snow into innumerable drifts of every conceivable shape and form. It was with much difficulty that Mr. Doane made his way through them along the untraveled thoroughfare and down the hill which led to the inhabited portion of Hopeton, for the site of the town extended far up the rugged hill sides and lapped over the summit at some points, making lovely situations for future suburban villas.

When he reached the vicinity of the building known as the store, from the door of which a crimson flag fluttered in the chill air, as sign or token that within could be found all the necessities from calico to codfish, from shoes to sugar, checked his fat and lazy oxen and leaving them to their own devices turned up the declivity leading to the home of his friends, the Moretons.

When he reached the door he was met by Mrs. Moreton, and as they exchanged the salutations of the morning he stepped into the sitting room where Bessie and Ruth were quietly engaged with their sewing, as he glanced around the apartment one of those inexplicable forebodings of evil fell like a pall upon his heart, and with blanched face and quivering lips he faintly uttered the one word "Ellen!"

In an instant the shadow reached the three inmates of the room as they perceived the truth.

"Gone home," said Ruth gaspingly.

"When?"

"Yesterday afternoon."

"Oh my God! help me, she has perished," and the strong man sank into a chair with his face in his hands rocking himself to and fro in an agony of grief.

"Ellen lost?" said one with a cry of anguish.

"Oh it cannot be," said another, "she must have stopped somewhere."

Just then a firm quick step was heard, and Robert Moreton stood within the door way looking inquiringly from one to another of the pallid speechless group. As Bessie perceived her brother she sprang up and throwing herself on his breast cried out between convulsive sobs, "Ellie's lost Robert, Ellie's lost!"

"The young man stood for a moment like one in a dream, then tottered back against the wall with a groan crying out: 'Oh my darling! my darling! why did I let you go?'"

"Friends," said Mrs. Moreton, "don't be so alarmed, she may be safely housed with some of the neighbors on the opposite hill."

Robert shook his head mournfully as he said, "No mother, no, I saw her as she disappeared over the top of the hill, but" (straightening himself up with a look of determination on his face) "this is no time to sit down and idly grieve," and going up to Mr. Doane he laid his hand upon his shoulder saying: "There is hope yet good friend, let's lose no time, the night has not been seriously cold and she was well wrapped."

"Yes," interrupted Ruth, "and she had something to eat for she had bought some rice, sugar, and dried fruit, and besides she had a small parcel of cake that Mrs. Hale had sent Jennie, and I know food will help to keep her from freezing."

"So with God's good help and guidance we may have her safely home within a few hours, let us lose no time," said Robert. "Mother," he continued, "please put us up some food, and sisters, get some blankets, and I will give the alarm and get some brandy. We must be on our way immediately."

Robert's cheerful voice, energetic manner and hopeful words put new life into the stricken father's heart. Arm in arm the two men left the house. In half an hour they returned having raised every able bodied man in the settlement. There were only eight horses and about twenty men.

The plan they adopted was, to make the search in couples as far as the horses held out two men to each horse walking and riding alternately; the remainder were to give the alarm to the few settlers through the country and procure more horses from them.

Robert took two blankets, and some food, a flask of brandy, matches, and some pine splinters, to aid in quickly kindling a fire and started, while Mr. Doane and Mr. and Mrs. Moreton were to be the bearers of the sad tidings to the waiting, anxious mother, then leaving her with these friends Mr. Doane would join in the search.

By the time Mrs. Moreton had completed her arrangements, and with streaming eyes had kissed her daughters ere she left them on this errand,—not a sound of life or labor was heard through the little village, the last company of horses and foot were rapidly ascending the hill which led out into the open country,—while here and there were discernible small groups of women with shawls thrown over their heads, talking over the first event which seemed likely to cast a shadow upon their hitherto happy community.

The men took with them horns, bells, and guns, the two former they were to use constantly to attract the wanderer's attention; the latter was to be used only on finding her, and by each man as he heard the report firing his gun the entire company would soon be apprised of the joyful event.

When they reached the open country they diverged in every direction, save that from which they had come.

Robert Moreton would neither hear nor heed the croakers who thought it impossible, "that

a frail young girl could live through such a night as the last had been,"—"and wolves?"—nonsense they were not dangerous, as timorous as young lambs no danger from them.

"We will find her, and soon I don't doubt," he said, but I thought he talked and argued to keep up his own courage as much as to convince his companions.

Of the scene that transpired at the cabin of Mr. Doane when the sad tidings were imparted to the stricken mother, it behooves me not to speak—there are some matters too sacred for portrayal.

It was many hours before Mr. Doane dared leave his wife in the care of their friends, and mount the horse with which their thoughtfulness had provided him, and join the search which was to him life or death.

CHAPTER IV.

The search was thorough and continued the remainder of that day and the whole of the next, extending over twenty miles in every direction, including a visit to a village, some miles south of Hopeton, of some twenty or thirty families from whence a goodly number turned out on foot and horse to help their distressed neighbors. But to no purpose, twice during the time tracks were discovered and followed until hidden by the ever drifting snow which at some points was two and three feet deep.

The second night came on, and no tidings of the lost one—her father was almost frantic, while Robert Moreton, with that determined look on his face, which told of a resolve never to abandon the search until his own strength failed, said little; but those who knew him saw that success was life—failure death.—The grief of these men was terrible, but they were constantly employed and in action, searching, watching, hoping as they rode, or walked that each step might reveal the form, or some trace of her they loved so well. Yes that was terrible, but what of the mother compelled by physical weakness and the little ones, who clung the more closely, at sight and sound of her distress, to the one who had always comforted them in their sorrows and alleviated their sufferings,—to remain quietly in the little cabin of which the dear daughter had been the light and joy, and which was filled with the evidences of her skill and thoughtfulness.—Who can portray the waiting and watching, until as night again drew near nature had exhausted her resources, and the poor woman went from one fainting fit into another, until it seemed to the group of kind friends who gathered around her that life would soon be extinct a physician who was friend as well as physician, was summoned from Hopeton, a skillful gray haired man whose mild countenance was an index of the benignity of his character.

He speedily quieted the nervous paroxysms, then administered opiates and soon the sorrowing mother was unconscious of her griefs.

The search was continued by a few during the nights while fires were lighted at various places on the small streams or creeks, and the men who were engaged in this search rested near these fires. The country was yet but sparsely settled so there were miles and miles of rolling undulating prairie, with the streams flowing through fringed by a belt of timber and a heavy undergrowth, where at long intervals would be discerned the settlers' cabins with their plots of fenced and cultivated ground.

The morning of the third day was clear and bright, and the air had softened so much that the snow was beginning to melt.

Many of the company had abandoned the search as fruitless, and returned to their homes. While Mr. Doane and Robert still held on miles apart—now riding rapidly—now pausing and calling again and again on the name which had lingered so lovingly upon their lips in days past. Now, out on those bleak snow clad wastes the sweet word sounded sepulchral, and it seemed at times to their disordered brains and high strung nerves, that mocking voices filled the air repeating the name in high and discordant notes again and again, until they died away in the distance to the faintest whispers.

They prayed—these stricken men,—as they hurried to and fro or paused on an eminence and surveyed the country far and near, prayed for her, prayed for the anxious hearts waiting for the tidings which it seemed might never reach them, but most they prayed for themselves, the father for submission and strength and grace to meet his trial as a child of God. But Robert held on to hope and only prayed for strength to hold out in the search, for when hope was gone he felt that his life must go with it.

As the third night drew near the father and lover met alone on the summit of a hill, which sloped towards the west a half mile or so, to the borders of a small stream whose banks were hidden by trees and a heavy growth of bushes standing leafless and gray against the white plains beyond.

As they met no word was spoken, a look into each others hallow eyes and haggard faces, told more than words—how futile had been all their efforts.

As they stood thus, their horses impatiently pawing the snow, their figures looming up on the snow covered hill clear out against the eastern sky, like giant statues upon a huge marble pedestal; miles and miles of undulating country met their eyes as they surveyed the scene pallid and glistening in the cold rays of the setting sun. Not a sound fell upon their listening ears, not a living moving object met their sights, drear desolation around, above, below, it seemed as though the warmth of life and hope had departed, and they were a part of a frozen world.

TO BE CONTINUED.

The Flower Garden.

"My flower seed did not come up," "Where do you get your seeds?" "I am discouraged trying to raise annuals in this climate." These are common expressions among ladies who have tried to grow the same flowers here that they used to in the eastern states, and a glance at our flower gardens will show that they are filled almost entirely with bedding plants. The beautiful annuals that bring so many surprises and are so cheap when they can be successfully grown are rarely met with. A visitor in Topeka last summer remarked that our taste for flowers seemed to run to geraniums and yellow roses exclusively; while this is rejected as base slander it must be admitted that all but a very few, perhaps one garden on each street, are destitute of any great variety and almost wholly without annuals. The seeds are selected with care, are bought every spring; the ground is fertilized and pulverized according to Vick's directions, the seeds planted the proper depth and great expectations spring up in the minds of the sowers but no plants in the garden. What becomes of them? It is folly to lay the blame on the seedgrowers; they know their business it is presumable and the cause of failure must be looked for further.

In the first place it is probable that the greater portion of the seeds were washed off the bed by the first hard shower. An unbordered bed that is slightly rounded up in the middle will not hold flower seed during the beating rains that prevail here in the spring; the tiny seeds run off with particles of the fine surface soil and are left to perish in the grass. In the next place those that are left and those that are planted in low, flat, properly-made beds perish for want of moisture. The dry constant wind absorbs the moisture from the surface so soon that before the seeds can germinate and gain a foothold in the damper earth beneath, they are left high and dry in a baked crust. If, fortunately, they had not begun to grow before they were caught in that way a subsequent rain may bury them deeper and after a while leaves will appear, but seeds once germinated will not bear a ten days' baking in a dry clod of earth.

To partially overcome these difficulties it is safe to plant all kinds of seeds from two to five times deeper here than in a climate where there is constantly more humidity; flower beds and borders should be made level with the surrounding surface and nearly always partially protected from the sun, and seed bed should invariably be covered with boards laid flat on the ground till the seeds germinate. As soon as it is discovered that the seeds have burst, the boards can be raised at one end and thus removed. A few waterings if a fortnight of drouth should ensue will nearly always insure beds of vigorous annuals. It takes a little more care to start them but there is no reason why annuals cannot be grown here if that care is bestowed, as well as farther east.—*Topeka Capital.*

Pretty and Useful.

A pretty toilet set may be made of perforated cardboard. It will require two mats, hair-pin cushion, match-holder and hair-receiver. The mats are cut circular, and the edge trimmed with leaves cut out of the cardboard in a lance-shaped style, and veins traced over them with silk or worsted, and then sowed on to the mat. Line it with colored paper, pasting it nicely around the edge of the outside circle. A large mat cut the size of a dinner plate, must be made for the pin-cushion.

The hairpin cushion is made of a piece of the same colored cardboard cut five inches square. Work some pretty pattern in the middle. Sew it together tightly and stuff it with curled hair. Crochet on to each edge five rows of long crochet. Sew up the ends and fasten on some ribbon to suspend it from the mirror, and sew bows on to each end and in the middle of the ribbon. For the hair-receiver take a piece of cardboard six inches long and seven wide, and fasten it into a cylinder, after working a border at top and bottom on the longest side, and an initial in the middle; crochet a bag at the bottom edge, narrowing it down to a point, and draw it up with tassels and cord; cut the top in points and slip in a piece of colored paper. Attach bows and ribbons on the outside and hang on the other side of the mirror.

The match-safe is cut and worked in the same way, and slipped over a tin can, and the top of it cut in points. If you wish, you can make a mat to set it on.

These toilet sets are extremely handsome, when made in silver and scarlet.

The Calla Lily.

Sometime ago a lady inquired how to take care of the Calla Lily. My experience teaches me that it needs very rich soil and plenty of water. It should have fresh dirt this spring and also have a good rest until fall, when it should be reotted and watered with quite warm water, and once a week with manure water. Never pour the water close to the stalk but pour it near the edge of the jar and let it run down. It will commence to blossom between Christmas and Easter (if it is old enough) and everyone knows how beautiful the blossoms are. If you wish to obtain two flowers, as soon as the joint begins to wither pull the stalk down through the open sheath clean to the bottom. At the bottom will be found close to the stalk another bud inclosed in a delicate covering, cut the old stalk away as close as possible without injuring the bud, and if you have not delayed it too long it will grow very fast. Sometimes people say that the Calla Lily will not blossom for them. They should then obtain some bulbs from one they know to be a good blossom, and plant the shy bloomer by its side. Try that for two or three years and if it does not blossom then it never will, and you may as well throw it away.

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The Brown Thrush.

Of all the birds of this continent this may truly be called the Nightingale of America. In fact he is equalled by very few of the songsters of the old world. The Mocking bird of the southern states is generally spoken of as the Kink of American Songsters," but much of his song is imitative, and that, too, of many discordant notes. That of our subject is all melody and sweetness, coupled with a fine variety although, like many other birds, individuals vary much in song and power. I have heard some that would approach nearer to the nightingale, than any bird known to me for compass of voice, clearness, and delicate, lively modulations. They arrive near New York in the early part or middle of April, not in flocks, but one by one, generally announcing their arrival from the top of a tree of medium height, with a thrilling melody, beautifully soft. During his song, his long brown tail hangs almost perpendicularly, his head is slightly raised, his long straight bill appears a little hooked at the point, while his whitish breast, with rows of brown spots, swells and throbs with the rich strains that he is pouring forth. His rufous brown back can be seen only when he flies low or is on the ground, as is often the case in the woods in the early season, scratching the dead leaves in search for hidden insects. This bird is very docile and confiding, and very strongly attached to its nest, even when it contains only eggs. The writer had a tree felled in winter where it lay until the following spring, when a team was sent to haul it to the mill. A Thrush was sitting on a nest of eggs, on rising ground directly in the path that the horses must take to remove the logs. The nest was carefully taken up and saved, the ground being so much disturbed by the horses and logs that all the grass and brush were removed and the ground left bare just where the nest was built. With regret for disturbing the poor bird, the nest was placed on the bare ground, as near the spot as possible and a rail laid on each side to keep it from falling; strange to say, the bird took immediate possession of her nest and hatched a brood. When on the nest she was so tame that my children frequently stood over and spoke to her without creating the slightest alarm.

This bird should not be confounded with the Wood Thrush, which is a shorter bird, not so reddish and whose song is always the same, while that of the other is a continuous change yet so rich and peculiarly varied as to be very easily recognized, somewhat resembling the Mocking bird in his natural song, not imitative. Its nest is built on or near the ground in a low bush generally near a marsh or meadow. The eggs are large, four or five in number, rather over an inch in length, whitish or greenish ground with spots of reddish brown covering much of the ground color. The nest is solidly built, but rather roughly formed of dry grass roots and fine twigs, and lined with fine grass, sometimes with softer material. This bird does not linger long to feel the cold in autumn; he is off in good season to seek a warm winter home starting about September, but does not travel as far as many birds. It is well that he is on the move before the shelter of the foliage disappears for being a confiding, tame bird, he would be an easy victim to the murderous gun. Liking society he is very often near houses, but generally retires a little to chant his matins and evening hymns. Early or late in the day is the most favorably time to listen to him. About sunrise he is very melodious, and it is well worth raising on a May or June morning to hear him, as but few of the Creator's arranged melodies equal that of this beautiful songster.

—HENRY HALE in Poultry Bulletin.

Pickling in Salt.

I have pickled butter in brine for thirty years. Washed fresh butter in brine ten years. Packed jars in dry salt one year. I am of the opinion that butter can be carefully made, packed and preserved, that it will so ripen and improve, that it is really better at six months old than it was at six days or six hours old. As a proof of my opinion, I send you a sample made and packed in June last. After supplying two families besides my own with butter from one cow, there was a surplus at the end of each week, left to be saved and packed for my winter use. I used three gallon stone jars. After pressing down the butter at the time any was put in, I poured on about two quarts of brine. At each addition poured off the brine, put in the butter, and returned the brine. When nearly all full, left brine about an inch in depth. Prepared a box, the inside of which was about two inches in diameter larger than the jar; placed at bottom of box about an inch of common salt; set in my jar; on all sides filled, and packed down salt; over the jar placed an earthen plate; then over the top of that placed about two inches of salt; then a board and set the box away. In this way the butter had an additional protection against the changes of atmosphere there may be in a common cellar, and the butter being doubly excluded from all air. When the steel trier probed it at our fair, something new had made its appearance to our committee. The butter was hard and firm, as when first made, and retained all the rich aroma it ever had, and became well ripened. The creamy buttermilk taste it first had had disappeared. Here I have a success from my experience in the use of dry salt upon the outside of the package by keeping an even cool temperature in the butter, and the butter in a place that it could lose none of its natural dampness. Thus salt proves to be cheaper and better than ice.—C. G. Taylor, Mass. Ploughman.

Colorado has a little over 1,218 miles of railroad, of which 758.16 is broad gauge and 460.44 narrow gauge. This is an increase of nearly 175 miles within a year.

Wellington, Sumner County.

June 9.—I read the FARMER regularly and carefully every week, and am especially interested in reports. Correspondents should make a plain and correct statement of their condition so that persons wishing to come to any part of our state can govern themselves accordingly. Your correspondent from this county, Mr. Moss, a good farmer and a gentleman, lives in the extreme western part, where from some cause the wheat is better than in any other part, and perhaps may report it for the whole county to a standard thereby. I live near the center, and have opportunities for seeing and knowing of the whole country, and will say that full one half of that sown will not be cut. From the deprivations of grasshoppers, from hail, from late sowing, etc., and the other half will not be more than half, at least.

With our heavy emigration, making hundreds more to supply, we shall be well to do if we have enough to seed and feed our country. The Walker and later varieties are the best, but the chintz bugs are at work on them, and straw is withered and fallen. Oats are very poor, and but few pieces will be long enough cut. That which was put in early and come up, will make a short crop; but late sowing, or that which laid in the ground until the rain in April came, will be a failure.

The greater part of this country has had but one rain since the snow went off. Some portions have had two showers.

Corn has done well, in fact very well where it was got in the ground early. It is now from knee to waist high, and early fields even more, and is clean, and the best pieces laid by. It is now rolling in the middle of the day, and will not do well long without rain.

Garden and truck patches are doing the worst of all. The early potatoes can't do much now.

Grass will be short, and our only show for hay will be millet, of which there will be much sown, provided it rains so as to bring it up.

The extension of the Santa Fe branch of the R. R. from Wichita to Colwell through the country is being pushed. The contract for grading has been let to within five miles, and will be the balance of the way to Wellington this week. In consequence of its coming our town is improving wonderfully, having nearly or quite doubled in the number of buildings this summer.

Settlers and adventurers are coming every day from all parts, expecting to find an Eldorado. Some are disappointed, as most kinds of labor are overdone. Yet any who want employment can find work, at wages reduced from former prices.

Stock has done well. Corn sells at Wellington at 22 to 26 cts.

People are in good heart. But little complaining compared with what we would hear in older states under the same circumstances. Those who have been here a few years know this to be a productive country, and the past has known but few or no failures. And if the prospects are dark on account of drought, they are not disposed to complain. RURAL.

Emporia, Lyon County.

June 11th.—Harvest is upon us, and farmers say wheat is turning out much better than expected. Mr. F. Workman, one of our Lyon county farmers, says he has never seen wheat fill so well as this year.

Corn is looking splendidly, except in close proximity to spring wheat, where the chinch bug is making it look as if a fire had gone through it.

Good rains passed all around us this week, but we were not fortunate enough to catch any in this "burg." We are not suffering though. Most all parts of the county have been drenched. C. C.

IMPROVED RUBBER TARGET GUN.

The latest and best. An entirely new principle. For Target Practice and Hunting. Shoots Arrows or Bullets.

Its power and accuracy are surprising. Makes no report and does not alarm the game. It is small, easily carried, and is in use and never fails to give satisfaction. With every gun are included Five Elastic Rubber Arrows, Two Targets, and Glass Sight. AGENTS WANTED EVERYWHERE.

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