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Mr. Swann on Mixed Farming.

Kansas Farmer:

I feel so much out of humor after reading Rev. Sternberg's article on Mixed Husbandry that I will have to ventilate some of his weak points.

Most of farmers simply follow out a routine life of it, and then complain. While I squarely say that each failure is the farmer's own fault (local causes, such as storms and frosts, excepted) there is no year but what some crop will mature in any country I have ever visited. The gentleman's own words prove it where he says rye saved him. Now, if all the farmers have sown their land in this State that was broken so they could have raised wheat and rye, the people of the State could have lived in luxury; but here is the fault: You will not try to learn what the seasons are going to be beforehand. And then, what crops do best in a general way for that year throughout the country. And the same for the next year on up for ten, fifteen or twenty. When you do this then you will work understandingly and that will bring you success. But do not think to say within yourself that no one can learn these points. There is no one who will show himself so weak as to say, and try to defend the position, that the past eighty-four years have each one been different from the others; they are not. But where is the party who knows how long they differ as they do in part until we have the same conditions in weather, crops and so on.

When farmers will take the pains to learn these things, then when the time comes to sow rye and wheat to bridge over the dry years with profit and pleasure, and cease howling and advocating the idea of many strings to his bow. The Lord has said we should have seed time and harvest. But do we always reap where we sow? Surely not. There are many who seeded in the best of order as I think who will not get back so much as the seed. And such I have known for fifty years and longer. Rain is promised and like the other we fall some years.

I have read and thought of the teachings of mixed husbandry so much, and have seen much of its bad effects that I feel like bouncing every one who advocates such stuff. It is mere trash. It only shows that the author is bewildered. Now if the R. v. gentleman had been posted as he might have been, no doubt, in the summer of 1873, and perhaps years before, he could have done good by saying to his friends—Sow all the wheat and rye you can as they will be the crops for 1874, as we will be dried out in all else, as he himself has said. I have been the victim not once but often of his teachings. Not owning land of my own I had to remove or do the bidding of some mixed husbandry land owner.

I have not written this to court controversy through the press; but I hope no one will ever be so thoughtless as to advise when they do not understand. You see no such mixing in other professions succeed. But in the outset Adam was a gardener or vine-dresser, Abel kept stock and Cain tilled the soil, etc. And perhaps the Rev. brother can preach; but certain it is he knows but little of successful farming as to what he might have known to-day if the proper course had been chosen.

Be it clearly understood that I say we are able, if life lasts to a fair age, to learn unmistakably what the seasons will be to us in general terms. And what are the crops best suited for the same long beforehand.

Reader, I have known for more than thirty years that no farmer could farm with success until he learns what the seasons would be before they come and what the crops best suited to each, and I hope no man will advocate such doctrine in the future. And I want to say let no man reply to this through the press if he should think it worth notice; but let all who wish nurse their wrath over it, and provide themselves with the best of weapons, and if I live I will be at the State fair of 1885 at Topeka and if any one thinks he is able to wring my neck on this great subject, let him try it. He will be as welcome to do so as the gentle zephyrs are to the right of way that blow over this glorious giant young State of Kansas.

J. C. H. SWANN.

Sedgwick City, Kas.

Western Reno County.

Kansas Farmer:

The implement spoken of as a sqd-cutter in my last communication, is also called a rolling harrow. It consists of twelve or more steel plates, resembling the rolling coiler of a plow, so arranged as to revolve upon a common axle.

We are done sowing oats. Quite a number have tried cultivating them into corn-stalks. Last year the oats planted in this way were good, while the wheat which was drilled in stalks was almost a total failure. This year the wheat in stalks is in perfect condition, while of that which was put in in the usual way not one-third will be worth harvesting. A nice rain came March 31, which may help it some.

Cattle are doing well and the losses have not been as heavy as usual. Sheep are mostly in good condition, although there are some heavy losses reported among the herds which were "roughed" through. We are sorry to note, also, the loss of a more than usual number of good horses, as the farmers in this part of Kansas have taken much pains to improve their horse stock.

A. M. B.

Wheat Crop of 1885.

Kansas Farmer:

The recent abundant rains and warm weather have developed vegetation in a remarkable degree, and the disastrous effect of the severe winter upon the wheat crop is now fully apparent. In a recent communication to the FARMER, I gave it as my opinion, the result of careful observation, that not more than three per cent. of the wheat crop in this vicinity was worth letting stand. The light of more recent development has not changed my mind. My observation is limited to a few townships of this county, but I have seen only one piece of good wheat. That was a small piece of late sown May wheat, upon bottom land and entirely surrounded by timber. I have noticed several fields with a strip of green from one to three rods wide upon one side where it had been protected by snow-drifts. All early sown upland wheat, and I am told early sown bottom is no better, is totally dead. Some of the late sown shows a feeble plant which wears a discouraged aspect. Nearly all wheat in this vicinity is early sown. I finished sowing a piece of 40 acres of Turkey wheat September 18. It is such a clean sweep that I do not believe that if every live spear was allowed to stand and was successfully harvested, the whole piece would yield one half bushel. I was over this piece and observed its condition during the February thaw. It

was then apparently all right. I think the sudden and intense cold which followed that thaw was what brought about the great disaster.

Taking into consideration the reduced acreage induced by the unprecedented low prices of last fall, and the present condition, I conclude the wheat in the hands of Jefferson county farmers next fall will be an insignificant factor in the aggregate of the season's operations. Farmers generally are taking a philosophical view of the situation, saying they are only out their seed and labor. The use of the ground for the season is not lost, but the soil is rendered in excellent condition by the work done in preparing it for seeding last fall. A greatly increased acreage of corn will be planted, as well as of flax sown, and much more than the usual amount of grass seed will be sown. Farmers as a class are inclined to be inert. They resist a change of their habits, but one of the most valuable lessons they are now learning—taught them by the present and similar disasters—is the monumental folly of special farming in this country. It don't pay for us to carry all our eggs in one basket.

EDWIN SNYDER.

Blooded Stock Sales.

The sales of thoroughbred stock last week do not come up with the prices of one year ago; however, there is no reason for discouragement among breeders of pure-bred cattle. The demand for well bred stock of all kinds is fully as good as last year with indications of being decidedly better as the season advances. The depression in monetary matters and the unusually severe winter which extended into spring has had a tendency to delay the demand for breeding stock and this undoubtedly explains the prevailing low prices. Yet notwithstanding these somewhat discouraging circumstances it is a fact that choice individuals of unexceptional breeding have brought long prices and indicate an advance over the good prices of last year.

The Carroll county Short-horn breeders of Missouri sold 74 head of young stock last week at Carrollton, at an average of \$89.50. The attendance was good and bidding fairly spirited under the promptings of that venerable auctioneer, Col. Judy, of Illinois.

H. D. Ayers & Son, of Breckenridge, Missouri, sold at public sale April 7, fifty-eight Short-horns for \$6730, an average of \$115. Twelve bulls averaged \$102, and forty-six females averaged \$120. The local attendance was not large but buyers from a distance were numerous enough to dispose of the cattle at close prices.

The day following the Breckenridge sale, W. P. Higginbotham, Manhattan, Kansas, made his third annual public sale of Short-horns. The attendance was fair and the stock was in good condition and included among the females a number of good cows. The prices realized were satisfactory. Thirty-seven Short-horns sold for \$5030, an average of \$136. Ten bulls made an average of \$110.50, and twenty-seven cows an average of \$145.

The first sale of Herefords was made at Kansas City, last Thursday and Friday, by the new auctioneer, C. H. Capern, of Cheyenne. The cattle were mainly young stock and of fair breeding. The cattle were the property of Geo. Leigh & Co., Aurora, Ills., and Downing & Greatrex, Woodlandville, Missouri. The number of buyers present were small and the sale was draggy

and prices moderate. There were fifty head catalogued but your representative saw only twenty-nine head sold, which averaged \$313. Nine females averaged \$375, and twenty bulls averaged \$284.75.

The Wool Market.

We gather from the April 4 circular of Walter Brown & Co., Boston, that the large stock of wool on hand January 1st, with the receipts since that time, considerably more than during the same period last year, and the near approach of the new clip, have inclined holders to embrace every reasonable opportunity to reduce their assortments before the new wools come upon the market. It will be some months before the new clip from Ohio and Michigan will be ready for sale, but in Texas the shearing has begun and in five or six weeks these wools will be on the northern markets, and the best of them can be favorably used in the place of washed fleeces, except for the finest grades.

The difficulty that manufacturers have experienced during the past year in running their mills without a loss, has induced many to try Texas and Territory wools in the place of washed fleeces, and in most cases with satisfactory results. As a consequence the number of buyers for this class of wool, especially for the finer grades, has largely increased during the past year, and it is predicted that it will not be long before the standard of values in this country will be regulated by the price of the grade wool grown in the far west and south, instead of by the quotations of Ohio X fleeces, as has heretofore been the case.

The past season has been a most satisfactory one to the shippers of wool, whether growers or local operators, in fact such has been the case for the past three seasons. The market with each year, although experiencing slight spurts from time to time, has been steadily settling to a lower basis, until the season just closing has developed as low a range of values as at any previous time in the history of the trade. The result has been considerable dissatisfaction on the part of local buyers who have shipped east and a feeling among some growers who consigned their wools, that they would have done better to sell at home. The direct cause of this condition of business has undoubtedly been the overproduction of woolen goods and consequent losses by manufacturers, and during the past two years, the mills have endeavored to rectify this difficulty, having generally succeeded, with the opening of the present year, in reducing the supply of their productions close to the basis of the demand; and also by declining to run their machinery except to fill such orders as they may receive for goods. This course has had a beneficial effect, and although we cannot report any material advance of values in that branch of trade, some improvement in the business is certainly noticeable and encourages the belief that manufacturing is now on a sound basis, with every prospect of a steady though slow progress toward a better market during the remainder of the year.

The present supply of wool at seaboard markets, in connection with the new clip close at hand, precludes the probability of any immediate advance in wool, but the outlook for the summer and fall we think, offers more encouragement to consignors than they have had for several seasons past.

KANSAS AND NEBRASKA.

	Light.	Ordinary.
Fine.....	18a20	14a16
Fine Medium.....	17a20	15a16
Medium.....	16a18	15a16
Coarse.....	16a17	14a15
Low and Carpet.....	14a15	13a14

The Stock Interest.

PUBLIC SALES OF FINE CATTLE.

Dates claimed only for sales advertised in the KANSAS FARMER.

April 22—J. S. Lemon, Short-horns, St. Joe, Mo.
 April 23—Col. W. S. White, Sabetha, Kas., Short-horns.
 April 29—Geary Bros., Aberdeen-Angus, Kansas City, Mo.
 May 1—Pettis County Short-horn Breeders, Sedalia, Mo.
 May 5—Cass County Short-horn Breeders, Pleasant Hill, Mo.
 May 6—T. W. Harvey, Polled-Angus, Kansas City, Mo.
 May 8—Miller & Roddick, Herefords and Polls, Kansas City, Mo.
 May 13, 14, 15—Jackson County Short-horn Breeders, Kansas City, Mo.
 May 16 and 19—Jas. Richardson, Short-horns, Kansas City, Mo.
 May 20—Powells & Bennett, Short-horns, Independence, Mo.
 May 22 and 23—Jas. E. Richardson, Kansas City, Mo., Short-horns.
 May 25—Leavenworth Short-horn Breeders' Association.
 June 3—Col. W. A. Harris and the Giffords, Short-horns, Manhattan.

RATIONS FOR WORK HORSES.

From the fact that food sustains life, we argue that in the quantity of food, the kind and quality, and the manner of feeding depends much of the strength, vivacity, endurance and general usefulness of work animals. Of the many millions of horses on farms and elsewhere in this country, remarks an Eastern exchange, it is certain that a large portion lose much of their effectiveness from lack of proper feeding. This is especially true of farm horses, which are more commonly fed with that which is most easily secured or least easily sold, rather than with that which carefully conducted experiments have shown to be the best and cheapest. In the feed of horses at active work the best will almost always prove the cheapest, because the efficiency of a team is paralleled by that of the men engaged in using it. Farmers who complain of dear help cannot afford to keep it employed either in using a poor team or one so badly fed that its natural efficiency is seriously impaired.

The subject has received most attention from the managers of street-car companies, city liveries and omnibus owners, who all depend for their profit on the cheapness and effectiveness of their team labor. Some of these have made many experiments in feeding, and the results of these can be profitably studied by farmers. The work of street-car horses is more severe than is found at long times on the farm. A horse that will thrive and do good work on hard paved streets can be trusted with the same feeding anywhere. In fact, failure is never allowed to arise from imperfect feeding. As long as a horse's feet stand soundly under him he can do a full day's work. All this is done with street-car companies on a daily ration of sixteen pounds of ground corn and oats, mixed with sixteen pounds of finely-cut hay for a horse weighing 1,200 pounds. This ration is varied somewhat to suit the individual peculiarities of different animals. There are large and small eaters among horses as among human beings, but on the average this will be sufficient for horses of this weight.

Most farmers feed more heavily than this and with a much greater proportionate increase in bulk. This constitutes a very common mistake in feeding. Relying largely on hay to furnish nutriment, the strength required to be exerted can not be had without so large bulk as greatly to impede the horse's freedom of movement. We have known farmers to feed more than twice as much hay as is given in this ration, while diminishing the grain to the lowest point or even giving none at all. The horse, of course, can live on hay; but it is very unprofitable food to be given him while at active work. If hay is given in excess at other times, or as the main portion of his food, it will cause unnatural distension of the stomach, which will impair his efficiency afterwards.

Ground grain is the cheapest form in

which nutriment can be given to working horses. But to produce the best effect it should be mixed with cut hay, not to give greater bulk, for this the horse's stomach does not require, but to make the food more porous in the stomach, so that the gastric juices may more freely work through it. Meal alone, especially of corn which has scarcely any chaff, will compact in the stomach and be less easily digestible. The heavy chaff of oats is one of the reasons why this grain is so valuable for horse feed. Another is that the oat abounds in nitrogenous or muscle-forming food, and is therefore worth more per pound where strength is required than corn or oil meal, whose chief constituents are carbonaceous or fat producing.

Regard must be had to the kind of work to be done. Liverymen, whose horses are required to make fast time on the road, feed more concentrated food than the managers of street-car horses. Remembering that porousness of the food in the stomach is all that is needed to insure good digestion, the meal ration may be proportionately increased. Just enough hay cut up to keep the mass of food porous, like a sponge, is sufficient. If oats are ground alone, the hull of the oat will furnish so much of bulk that little cut hay will be needed, and for a part of this wheat bran may be substituted. Four or five pounds of hay per day may thus be made to serve to give bulk to a mixture of concentrated food, consisting of corn and oat-meal ground together with an addition of bran, and perhaps a small quantity of oil-meal, say a quarter to one-half pound of the latter in each feeding. The bran and meal are excellent to keep the bowels in good condition, though just at the times of severe work the oil-meal had better be omitted. It is wiser policy to keep the bowels working freely by judicious feeding, rather than to allow the horse to become constipated and then dose with physic.

There is much more virtue in bran and wheat middlings as food for working horses than is commonly supposed. In many places bran is sold as cheaply by the ton as hay. For giving strength it is more valuable pound for pound, and it is nearly as good as cut hay as a divisor of more concentrated nutriment. Wheat middlings are also excellent, but they need to be mixed with a larger bulk of cut feed to insure against impaction of the stomach. If hay cannot easily be obtained straw will answer as a divisor, though the quantity of hay absolutely required is so much less than is generally used that a very little will suffice for a horse's food during the working season, provided grain or meal can be had in abundance.

Owners of horses in cities have long learned economy in the use of hay as feed, which might be profitably imitated by many farmers. Having to buy everything that they feed, city people soon learn to calculate closely as to comparative cost and efficiency of feed. Too many farmers act as if hay was produced with little or no expense. Should they reckon the interest on high-priced land and the labor in securing the crop, they might easily find their home-grown hay the costliest feed their teams could eat. Most farmers are averse to selling hay, which is usually proper enough, as this has a tendency to exhaust their soils, but they have no such prejudice against selling the coarser grains, that take from the soil a greater value than the same weight of the best timothy hay. Hence they feed hay and sell grain under the mistaken notion that this is the best way to maintain the fertility of their farms. They should know and consider that the manure from a ton of wheat bran or wheat middlings contains more of the valuable elements of plant food

than the manure from a ton of timothy hay. We are not advising farmers to sell hay, but a plan of feeding which substitutes grain or wheat middlings for less valuable feed will enable them to get more work from their teams, make more valuable manure from their stock, and thus enable them to do better farming in every respect.

HEALTH AND THRIFT OF SWINE.

Another prize essay, prepared by H. P. Lewis, Brady, Pa., and printed in the *National Stockman*, Pittsburg:

The wild hogs from which the domestic breeds have taken their rise are natives of Europe, Asia and Africa, and are found wherever the climate is mild enough to afford sustenance in winter and in a domestic state wherever civilization has been extended. The fact of the origin of the domestic hog is well established, from the fact that it will inter-breed and continue entirely fertile, the succeeding fertility of the offspring, to the remotest generations proving the homogeneity of the species. It is said that the fecundity of swine in Virginia forests was so great that in eighteen years after their introduction the inhabitants of Jamestown had to palisade the town to keep them out. They were first introduced in Virginia in 1609. It is further said that Columbus introduced or brought swine to Hispaniola in the year 1493. They were not found at that time in a wild state in America. They were introduced into Florida by DeSoto in 1538, and into Canada in 1608. In America, Australia and in the Polynesian group hogs were unknown until introduced. In England the wild species has long been extinct. In France they are nearly so, but in some parts of Germany, Denmark, Italy, Greece and Asia Minor they are still met with.

I have hinted already at the fact that swine have been taken from a wild state and domesticated. First, I notice that all diseases are contracted through this domestication. We may thoughtfully roam through the wild forests, etc., noticing how the natural instinct of these wild animals leads them to use such food as secures to them thrift and health. They are free, have free access to pure water, and have no rings in their noses to prevent them from taking up that root which their stomachs crave. See them turning over the fallen leaves in search of nuts, of which they prefer some of all kinds, and do not wish to make a full meal on any one kind. And there see them turning over that old rotten wood; they are after a fat old grub now. They move slowly on. Perhaps they notice a pea vine and take a little of that, and so on, and finally appear satisfied with all this variety of food. And last of all they hie away to water, likely a sparkling rivulet, to quench their thirst, or to lie down in its cool embrace; or if the weather be cold, after they have quenched their thirst they will repair to their comfortable nest of leaves in the most sheltered spot to be found. Why they have several nests! There are six going into that one, which is all there is room for there. Notice how those old trees have fallen, and now notice the rest in different groups hiding themselves away among the leaves and brush. I have never followed them in their wild state, but presume this is somewhat their way.

We now have them domesticated, and have deprived them of most of this liberty, and of necessity must deprive them of their food in its wild state. What shall we do? Shall we reduce them to a solid corn diet, filthy water, filthy, hampered quarters, and expect them to be healthy and thrifty? No! We see them in their wild state with plenty of pure water, a great variety of food, with clean ground to roam upon, a clean nest to sleep in, etc. We may learn from this, then, in order to secure their health and thrift we must provide them with an abundance of pure water, a great variety of food, room for exercise, and clean, comfortable quarters. These three things must not be lost sight of. How to provide those at all times for your swine is a question for each reader of the *National Stockman* to decide for himself, as no rule could be laid down to suit all, some perhaps owning 500 hogs and others five.

The winter management of swine in our Northern States is the most difficult, as swine in their natural state occupied warm or moderate climate, where they could have wild grass and vegetables the year round. These or our modern vegetables must be supplied. These, with grain and roots, must form the

basis of food for winter. Cut clover hay, steamed, or moistened with boiling water, would be a good substitute for the grass. Swine in confinement should always have charcoal, bituminous coal, salt and wood ashes within reach, to which may be added sulphur, black antimony, copperas and bone dust. There are no farm animals nicer in the food they eat than swine if allowed to be. It is true they are omnivorous feeders. So is man. Like man, although they eat flesh, fish, fowl, vegetables, roots and grain, they like it fresh. If forced by hunger they will eat disgusting substances—so again will man.

No one should attempt to carry more hogs over winter than he has good shelter and accommodations for. Better sell off half the herd and spend the money for suitable houses for the rest. You will have a better net gain, more satisfaction, and no sick hogs.

CAUSES OF DISEASE.

Almost all diseases of swine may be traced to neglect, insufficient and unwholesome food, insufficient shelter, filthy, nauseous pens, lying on dung heaps, inhaling large quantities of deleterious gases, lying in cold wet beds, and exposure to the inclemencies of the weather. Permitting too many to sleep together, and breeding to animals that have been diseased, or in-and-in breeding, the feeding of smutty corn, not providing a variety of clean, wholesome food and water—these I believe to be the principal causes of disease in swine.

Farmers are very careful when they couple their sheep, but allow their pigs to come at any time. This is a bad mistake. No pigs should be dropped in December, January or February. They cost more than they are worth at that time. If this precaution is taken the task of getting our stock safely through the winter will be much more easy, for if a young pig gets badly chilled it is almost worthless. It is a good policy to have them come as early in spring as possible, and to turn them off the same season. If the sow drops her pigs the 1st of March, she can be put with the boar the 4th, and if in good condition she will generally receive him. If she fails at this time she will not come in heat until the pigs are weaned, which should be in six weeks; yet this will not throw the next litter later than September.

Gestation continues about four months. Three months, three weeks and three days is about the average time. Strange to say, a variation will sometimes be found of thirty days. I have noticed young animals carry their young for a shorter time than older ones. Sows usually remain prolific for five or six years. Old sows are the best mothers, and should not be kept too fat when pregnant. When in milk they should have plenty of succulent food, milk and slops. A patch of artichokes is indispensable for fall and winter use, as it should be remembered that if swine remain healthy they must root. As we tried to show, it is their nature to do so; it is no vice, as some term it, which should be corrected by rings, etc.

It is very necessary that sows have a warm farrowing place for March, etc. In the summer they will do well out of doors, but in no instance should they be allowed together at this time. In case the pigs should get chilled immerse them in a tub of warm water and rub dry. If any incline to scour, feed the sow on dry food for a few days. The pig is born with teeth that in a short time are competent to grind and prepare food for the stomach. Hence their early weaning is recommended. They should have at this time skimmed milk, butter-milk and ground grain, boiled and made into mush, with some whole corn. Many pigs are ruined by feeding too much at a time. They should be fed when young at least six times a day.

The kind of pens to build is important. No pen can be kept in order unless it has a tight plank floor. It does not need to be very high; six feet to loft is sufficient, which should be laid with boards for corn, and bins made for chop and grain. A cave can be made adjacent for roots and vegetables much more easily than to have a cellar under the hog house, which can never be kept clean. I think a good plan would be, for large lots of hogs, to build quite a lot of movable pens, having them close and tight, for all should be warm, and so arranged that when the surroundings become muddy and filthy they could be taken a few rods off. In this way a model small pen would answer for the model large pen, and be much easier moved than the cholera.

By this time hogs should be ripe for the butcher, and I presume as a rule

were confined during the fattening season, which is not objectionable, if the former precautions were carried out. I have never had a sick hog that I knew of since I owned them, which is twenty years. I have had sixty-five head, and at no time less than twenty. I have my pen built in the orchard and allow my stock hogs to go out every day during winter. The coldest days they all go to a spring or a run, and get a drink, no matter how much milk or slop they get in their pens. But in the coldest days they make good time. In summer I always kept them in my orchard until harvest, unless it was cropped, or until the young clover got a good start. It contains six acres. I am now plowing it and mean to plant it to artichokes and corn in the spring.

SUMMER MANAGEMENT.

I have hinted at part of the summer management. If hogs are well wintered they are easily summered. This is the warm climate part of the year, from which they were taken in their original state. They should have a good clover pasture or young grass, with all the slops and milk that can be had about the premises, with grain given to them regularly. Great care should be taken that all get their full share, and none too much, for when they are full of grass or clover they cannot take so much milk as they can in winter, when subsisting on dryer food, without injury. Swine are much annoyed by flies and insects during summer. To get rid of these and to cool themselves they go and plunge into the water and mud, if any is about. This when dry forms a coat which causes them somewhat from the insects; but if they have not a good rubbing post it may do much harm by keeping their pores closed too long. In their natural state the brush and trees and rubbish of the forests readily relieved them of any coat of dirt they were carrying; hence the necessity of a good scratching post, which can be made by boring holes at different heights in a post, inserting sharpened pins, having the post placed firmly in the ground. If lice make their appearance, apply coal oil, pouring it along their backs, being careful to supply their necks with a good amount.

Swine will generally go to their pens to lie during part of the day, if they are kept dark, which adds much to their comfort. A little precaution in building pens will secure this. They should have all the sun and light possible in winter, and be kept dark during summer. I have said that swine are easily summered. I do not mean by this that they will take care of themselves. On the contrary, they need careful attention every day. It is only by persistent effort and study of their wants each day the year round, and supplying them, whatever they may be, that you can secure the health and thrift of swine.

Lice on Osage Orange.

An Iowa farmer discovered lice on the under side of Osage orange leaves, and sent them to the *Western Rural* office with request for advice in the way of remedy.

We have not heard of any insect seriously attacking that plant in Kansas, but it is well to be on the lookout. The *Rural* suggests that "petroleum emulsion has the credit of being a very superior insecticide, and it is neither expensive nor difficult of preparation. Experiments carried on during the last summer at the Michigan Agricultural College upon the use of kerosene as an insecticide resulted in marked success. A good emulsion was found to be made from a gallon of water and a quart of soft soap, brought to a boiling heat, and the vessel containing them being removed from the fire, a pint of kerosene was thoroughly stirred in. This was found to be a sure remedy for the apple tree bark louse, but for some or most purposes it will be better diluted. For most purposes, however, a better emulsion was found to be made by mixing one part of kerosene oil with five parts of milk, either sweet or sour. This mixture was applied to many tender plants with no injury to twigs or foliage. When used in the proportion of one to three, many plants were injured. When even more dilute than one part of oil to five of milk, the mixture was

sufficiently strong to dispatch most insects. When only half that strength it destroyed quickly all the apple tree lice. The proportion of one to five, however, was found to be always safe and expeditious. It killed the striped cucumber beetles, squash bug, grape fleas, and many kinds of larvæ. It is readily applied with a fountain or syringe. Professor Forbes of Illinois has used kerosene with success in destroying chinch bugs."

It is said that fully \$5,000,000 have been invested in Montana ranches by English capitalists within the last year. This was almost entirely for stock and fencing, as the land belongs almost entirely to Uncle Sam.

Some one said: "Show me a country in which much attention is given to sheep, and I will show you a prosperous country." And it is even so. Systematic sheep husbandry persevered in means solid wealth to the individual and to the State.

Oats have been hitherto but too much of a secondary crop, planted to make out a shortness in corn. In feeding it will be found highly economical, as well as healthful, to cut the oats and straw together, mix with cotton seed meal or shipstuf, not forgetting salt.

When apples, turnips, onions or beets are frozen, it does not necessarily destroy them, provided they are not thawed too suddenly. If placed where they will gradually thaw, care being taken not to disturb them, they will be but little injured, provided they are afterward kept in a cool place.

There is a great difference in value between a carrot that runs down into the soil a foot and a half to two feet in a nearly true taper, and one that puts the same weight into the first six or ten inches and then suddenly shrinks to a fine root that breaks as easily as cotton thread.

The Duty of State Legislatures.

Legislatures in every State should regulate the sale and use of the many poisons resorted to by women in their desperation to obtain a beautiful complexion. There exists in Dr. Harter's Iron Tonic every requisite to accomplish the object without injuring health or endangering life.

Improved stock has a fascination and substantial profit that is popularizing it all over the enterprising West. It is attracting the capitalists and business men from the city. It is giving a new interest to farming and to farmers' sons. Improved stock keeps the boys on the farm and makes good business farmers out of them.

\$3,000,000 in Horses.

This amount represents the value of the Percheron horses imported from France by M. W. Dunham, "Oklawn Farm," Wayne, Illinois. Over 1,000 of these have been distributed to every part of the United States and Canada, adding untold millions to the wealth of these countries. Within the past twelve months Mr. Dunham has purchased and imported over 600 head, nearly all recorded in the Percheron Stud Book of France, with pedigree in full.

Mt. Pleasant stock farm colony, Anderson Co. Kansas.

J. S. HAWES
Imports and Breeder of
HEREFORD
Cattle.

I have one of the largest herds of these famous cattle in the country, numbering about 200 head. Many are from the noted English breeders, T. J. Carwardine, J. B. Green, B. Rogers, W. S. Powell, Warren Evans and P. Turner. The bulls in service are "FORTUNE," a two-year-old bull with five of his get at Kansas State Fair, 1892 and 1893; Imp. "Lord Wilton" bull "SILVERLYN" own brother to "Sir Bartle Frere;" Imp. "DAUPHIN 18th," half brother to T. L. Miller Co.'s "Dauphin 18th;" and "THE GROVE 4th," by "The Grove 3d."

To parties wishing to start a Herd I will give very low figures. Write or come.

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

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

BREEDERS' DIRECTORY.

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

CATTLE.

SAROXIE HEREFORD HERD. J. Gordon Gibb, Lawrence, Kas., importer and breeder of Hereford Cattle. Stock for sale.

OAK WOOD HERD. C. S. Eichholtz, Wichita, Kas. Live Stock Auctioneer and breeder of Thoroughbred short-horn Cattle.

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

A. HAMILTON, Butler, Mo., Thoroughbred Galloway cattle and calves out of Short-horn cows by Galloway bulls for sale.

WALNUT PARK FARM. Frank Playter, Prop'r., Walnut Crawford Co., Kas. The largest herd of short-horn cattle in Southern Kansas. Stock for sale. Correspondence invited.

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

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

U. P. BRUNET & SON, Lee's Summit, Mo., breeders of THOROUGHBRED SHORT-HORN CATTLE, pure-bred sheep, Berkshire swine, Bronze turkeys and Plymouth Rock chickens. In pecun invited.

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

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

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

CEDAR GROVE HERD of SHORT HORNS.—E. O. Evans & son, Prop'r., Sedalia, Mo. Young-bred of the most popular families for sale. Also Bronze Turkeys and Plymouth Rock Chickens. Write or call at residence of Dr. E. C. Evans, in city.

W. D. WARREN & CO, Maple Hill, Kas., importers and breeders of Red Polled Cattle. Stock for sale. Correspondence solicited. R. R. station, St. Marys, Kas.

DEXTER SEVEY & SON Le and, Ill., breeders of Thoroughbred Hovstein Cattle. Choice stock for sale, both sexes. Correspondence invited.

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

LOCUST RETREAT FARM. Bacon & Campbell, Manchester, St. Louis Co., Mo., breeders of HOLSTEIN CATTLE and PLYMOUTH ROCK FOWLS. Holsteins excel in milk, butter and beef. They are the all-purpose cattle. First-class stock for sale. Plymouth Rocks are the farmer's fowl. Pair \$3.50; trio, \$5.00. Eggs \$1.50 for 13.

CATTLE AND SWINE.

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

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

GREENVIEW FARM. G. A. Lundy, Humboldt, Kas., breeder of short-horn Cattle and Poland-China Swine. Also Saddle and Harness Horses.

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

WOODSIDE STOCK FARM. F. M. Neal, Pleasant Hill, Polk, Kansas Co., Kas., breeder of Thoroughbred short-horn cattle, tonswool sheep, Poland-China and Berkshire hogs. Young stock for sale.

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

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

SHEEP.

E. GOPLAND & SON, DOUGLASS, KANSAS, Breeders of Improved American Merino sheep. The flock is remarkable for size, constitution and length of staple. Buck a specialty.

RECORDED Merino Sheep, Bucks, Turkeys, Light Bred and Plymouth Rock fowls. Eggs for hatchling. Cash on use free. R. T. McCullay & Bro., Lee's Summit, Mo.

C. F. HARDICK & SON, Louisville, Kansas, breeders of RE-REGISTERED AMERICAN MERINO SHEEP, Having good constitution and an even fleece of fine, dense wool. Fine wool a specialty. Come and see our flocks or write us.

A. F. WILLMARTH & CO., Ellsworth, Kas., breeders of Registered Spanish Merino sheep. "Woolly Head" 54 at head of flock. Choice rams for sale. Satisfaction guaranteed.

SWINE.

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

SWINE.

S. H. TODD, Wakarusa, Ohio, breeder of Recorded Premium Chester White swine and imported European Down Sheep. Send for circular with prices and particulars. It pays to get the best.

H. M. BOOKS & CO., Burlingame, Kas., importers and breeders of Recorded Poland-China and Large Berkshire swine. Breeding stock the choicest from the best herds in seven states. I have special rates by express. Write.

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

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

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

ROBERT COOK, I-ia, Allen county, Kansas, Importer and breeder of Poland-China Hogs. Fully warranted first-class. Write.

POULTRY.

GEO. H. HUGHES, North Topeka, Kas., 14 first prizes (Felch and Pierce, Judges) on W. F. B. Spanish. P. Rock cockerels, \$2.50. Eggs, \$3 for 13; 25 for \$5. Prepared shell, 100 lbs. \$3. 12 egg baskets, 90 cts. Poultry Monthly, \$1.

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

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

EGGS FOR SALE—From Light Brahmas, Buff Cochins and Plymouth Rocks. 14 for \$1.75; 25 for \$3. Also Pekin Ducks, 11 for \$1.50; 25 for \$3. Also Emden Geese eggs 6 for \$2; and Bronze Turkey eggs, 12 for \$3. W. J. McCoin, Waverland, Shawnee Co., Kas.

BRONZE TURKEY EGGS—\$4.50 per 12. Our 100 weights over 4 pounds. Plymouth Rock eggs, \$1.50 per 12. H. V. Tugsey, Pittsburg, Mo.

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

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

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

ONE DOLLAR per thirteen for eggs from choice Plymouth Rock fowls or Pekin ducks. Plymouth Rock cockerels \$2 each. Mark S. Salisbury, Box 931, Kansas City, Mo.

S. R. EDWARDS & BRO., Emporia, Kas., breeders of high class Plymouth Rocks and Partridge Cochins. Eggs, \$2 per 13. Correspondence cheerfully answered.

RIVER-IDE POULTRY YARDS—Plymouth Rock and Partridge Cochins for sale, and eggs during the hatching season. Watson Randolph, Emporia, Kansas.

GROUND OYSTER SHELLS FOR SALE. Five pounds, 5 cents per pound; 25 pounds, 4 cents per pound; 200 pounds, 3 1/2 cents per pound. It is the best egg producer known. Give us a trial and be convinced. 100 Pure Plymouth Rock Eggs for sale—\$2 for 13; \$3.50 for 25. G. H. Flinnau, 71 White avenue Topeka, Kas.

MISCELLANEOUS

THE PATENT NEST, Eggs, chicks, etc. Safe against weather, vermin, etc. Guaranteed. Endorsed. Incubators. \$10. Eggs pure 9 c. Circulars. POULTRY SUPPLY CO., WELLS-TOWN, IND.

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

PROSPECT FARM—H. W. McAfee, Topeka, Kas. For sale cheaply registered short-horn bulls, 1 to 3 years old. Also, 4 head of pure-bred horses.

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

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

Cures all Open Sores on Animals from any cause.
STEWART'S HEALING POWDER
At
Hardware or
Drug Stores.
50 Cents a Box.

THE LINWOOD HERD SHORT-HORN CATTLE



W. A. HARRIS, Linwood, Kansas. The herd is composed of VICTORIAS, VIOLETS, LAVENDERS, BRAWNIES SECRETS and others from the celebrated herd of A. C. Hickshank, Sittyston, Aberdeen, Scotland. GO DEN DROPS and URYs, descended from the famous herd of S. Campbell Kinellar, Aberdeen, Scotland. Also, YOUNG MARYS, YOUNG PHYLLINES, LADY ELIZABETHs, etc. Imp. BARON VICTOR 4224, bred by A. C. Hickshank, and Imp. DOUBLE GLOSTER head the herd. Linwood, Leavenworth Co. Kas. Is on the U. P. R. R., 27 miles west of Kansas City. Farm joins station. Catalogues on application. Inspection invited.

Gossip About Stock.

Jas. Weidlein, Peabody, Kansas, of poultry fame, has now started a herd of Herefords making the entire purchase of J. S. Hawes, Colony, Kas.

A list of entries to the stakes of the Kansas Association of Trotting Horse Breeders, to be trotted at the inaugural meeting in 1885 is published, containing a large number of good animals.

Don't forget the public sale of fine Short-horn cattle to be made by Col. W. S. White, Sabetha, Kansas, April 23. He promises a lot of choice cattle. This herd at our best fairs won the sweepstakes as the best Kansas herd.

At the recent convention of cattlemen in Wyoming the veterinarian reported that there was no contagious disease among cattle in that region. A resolution was unanimously adopted prohibiting horse racing and card playing on the ranges.

One of our Illinois subscribers, a patron of a creamery in his vicinity, writes that one of his common grade cows furnished in seven days nine gauges of cream besides supplying a family of three and food for her calf. The cream brought 20 cents per gauge. Good cows pay for themselves in a few months.

On Friday, April 24, J. D. Ellis, of Clay Center, Kas., will close out his entire herd of Short-horns at public sale at the fair grounds. This will be one of the opportunities of the season, for at such sales the best breeding cattle must necessarily be included. It is fortunate for the farmers of that portion of the State to have a sale of blooded stock so near them.

The consolidation of the National Norman Horse Breeder's, and the American Percerion Horse Breeder's Associations, is proposed. Leading members in each favor the movement. They see no reason why the expense of conducting two associations and publishing two stud books should be continued when the work can as well be done under one management.

Beginners in the breeding of Berkshire swine who wish to start right and secure the uniform excellence in their stock which always betokens the skillful breeder, should study the standard of excellence in volume II of the American Berkshire Record. When they can show hogs that fill its requirements perfectly, they will find themselves rated among the foremost breeders of the day.—*Swine Breeders' Manual.*

Henry Blakesley, Peabody, Marion county, Kansas, purchased last week of C. E. Leonard, and Dr. Cundiff, of Missouri, seven more Short-horns for his breeding herd. He paid \$800 for Charming Rose 10. The fact is no mean or poorly bred cattle are to be found in this herd. At the combination sale recently at Peabody, he contributed five head that averaged \$278. He informed the writer that he has five bulls for sale. This is an example of the success to be obtained when a breeder starts right with good useful cattle.

About forty stockmen, representing seven counties of Missouri had a consultation last week with Col. Colman, the new Commissioner of Agriculture and Governor Marmaduke concerning the pleuro-pneumonia in Callaway county, that State, and they urged upon the Governor that he call a special session of the legislature. He has not yet complied with their request. The disease had broken out on the State farm, and a hundred animals had died. Dr. Trumbower, Inspector for the National Bureau of Animal Industry, stated that at least a thousand head of cattle had been exposed to the disease.

Phil Thrifton writes: There is no denying that the interest in sheep raising in the United States has greatly declined within two years past. The general opinion is that wool growing is no longer a profitable business except possibly where the best methods and the most favorable conditions prevail. The chief sources of profit, therefore, in the handling of sheep at this time, are to be had in the production of superior mutton, and by increasing the fertility of the lands on which they are kept. The growing taste among Americans for good mutton is an encouraging sign to sheep breeders, and is leading them to renewed efforts toward improvement in this direction. It has certainly awakened new interest in the Southdown sheep so long and so highly esteemed in Kentucky, Ohio and Indiana, as well as in central Illi-

nois where it has been favorably known for over forty years. Here particularly the soil and climate seem better suited to the Southdown than to heavier or more open fleeced breeds. The advantages of having a few sheep on the farm have often been insisted on, yet there are comparatively few farmers, even where all the conditions for their most profitable keeping seems to exist, who pay any attention to sheep raising. The almost invariable excuse for this failure to do what nearly every one agrees should be done, is the sad experience of loss from dogs. By general consent dog laws are rated as failures, and as a result, what might be made a leading industry in the country, and a grand source of meat supply to the nation, is left without encouragement or protection. To breeders however who have learned the efficiency of cold lead and wolf-bait there are handsome profits in the handling of well bred mutton sheep. If the recent immense orders from the British government for American beef are rightly expected to cause advance in prices favorable to American cattle breeders, may they not also have a favorable effect upon the sheep breeding interest of the country? At all events, the mutton sheep is evidently gaining in favor and we are glad to believe that the advances being made are permanent because founded on a growing public taste not likely to be checked by tariff legislation.

Cattle Disease in Missouri.

We copy from the Daily Capital:

At a meeting of the State Live Stock Sanitary Commission, held in the office of Dr. A. A. Holcomb, the State Veterinarian, that official made a detailed statement of his investigation into the outbreak of contagious pleuro-pneumonia at Fulton, Mo., where he had been sent by order of the Commissioners at their preceding meeting, on March 13th. The Doctor's report embraced a full history of the disease from the introduction of the Jersey bull bought of Messrs. Tripp, of Peoria, Ill., last July, up to the time of the meeting held at Topeka on March 31, when measures for the suppression of the disease were considered by the citizens of Missouri. After a full consideration of all the facts pertaining to the disease, the Board of Commissioners decided to recommend to the governor that the following States be quarantined against on account of contagious pleuro-pneumonia, and that all cattle of the bovine species coming from the listed localities be prohibited from coming into this State unless they undergo a quarantine of ninety days at the point of introduction, and that all cattle from the said localities be required to enter the State at Atchison, Kansas City or Fort Scott. The places quarantined against are the States of Connecticut, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, Virginia, West Virginia, Ohio, Illinois, Kentucky, Tennessee, and the counties of Calloway, Boone, Audrain and Montgomery, all in the State of Missouri.

They also addressed a letter to the Commissioners of Agriculture, as follows:

STATE VETERINARIAN'S OFFICE,
TOPEKA, KAS., April 9, 1885.

Hon. N. J. Colman, Commissioner of Agriculture, Washington D. C.:

SIR: I am directed by the Live Stock Sanitary Commission of the State to transmit to you the following preamble and resolution, adopted by them at a meeting of the Board held here to-day:

WHEREAS, Contagious pleuro-pneumonia of cattle has, during the past few months, infected several of the western States and greatly endangers the live stock interests of the State of Kansas; therefore, be it

Resolved, That we, the Live Stock Sanitary Commission of the State of Kansas, do most respectfully request and urge the Hon. N. J. Colman, Commissioner of Agriculture, to adopt and enforce the most rigid and effective measures of quarantine and suppression against this disease; and that the question whether or not danger is to be apprehended from the cattle shipped from Cynthia, Ky., to Austin, Texas, be fully determined and made public.

By order of the Board,
A. A. HOLCOMBE, Secretary.

An order to all the railroads doing business in the State was issued directing that all cars used or offered for use for transporting stock in this State be thoroughly cleaned and disinfected, as is provided by section 8, special session laws of 1884.

An order was also issued to the Sheriff of the county of Summer directing him to learn the facts regarding the bringing into the State of certain Mississippi cattle, with instructions to take and hold them in close quarantine as they were brought here in violation of the Texas fever law, and to report his findings to the Board.

The question whether or not Missouri shall be finally included in the quarantined district depends upon the results effected by the measures which the State shall adopt. If the disease is permitted to spread from Calloway county and proper measures of eradication are not adopted, then we are left with no alternative—self-protection of our large live stock interests will demand the exclusion of all Missouri cattle. The law passed by the Legislature of that State at its

recent session provides measures which are scarcely capable of practical enforcement, and certainly they can prove of little value in an outbreak of any of the most serious contagious diseases. Had they adopted laws similar to ours of the special session they would have avoided a very serious dilemma and have saved money. As it is now no one can tell just where the matter will end nor how much it will cost.

This, That and the Other.

Dean Alford flattered himself that he knocked out over 1000 commas in the course of revising the Greek text of the New Testament.

A native book just published in Bengal traces the mental and physical degeneration of the Hindoos to the fact that the English are allowed to slaughter cows in India. The author abuses the English for eating beef, and proves to his own satisfaction that no beef eater is a good man.

"The hair of William Jones of Hall county," says a Georgia paper, "has been perfectly white, but seven or eight years ago it began to change, and now is entirely black and luxuriant, while his beard is still white. Mr. Jones, who is ninety-two years old, served in the war of 1812."

In Maricopa county, Ari., there is considerable barbed wire fence, and the vast flocks of wild ducks which frequent the valley often fly low, and striking the barbed fence, become impaled thereon. It is said that tons of ducks are gathered daily by boys from the fences and sent to market.

The town of San Diego is the oldest white settlement in California, the mission having been founded by Juipero Serra in 1769, seven years before the Mission Dolores was planted. The harbor, with twenty-three feet of water on the bar, is the only good harbor on the coast of the State, except San Francisco.

An agriculturist at Oakland, Cal., is making an effort to introduce the cultivation of tea in that State. He has over 2000 tea plants in a very thriving condition, and when they arrive at the age of four years he will obtain Japanese labor and pick and cure. He has also a number of camphor trees that are growing well.

A little boy was called as a witness yesterday in the Quarter Sessions. He was all over trembling. "My boy," said assistant District Attorney Kinsey, smiling like a good father, "do you know the nature of an oath?" "Oh, y-yes, sir," answered the boy. "Well, if you should tell a lie and die, what would become of you?" "I should become a mummy, sir."

"Several queer incidents," says the Washington correspondent of the Chicago *Inter-Ocean*, "have occurred lately at the top of the Washington monument. The other day a gaunt and hungry cat made her appearance on the scaffolding where the workmen stand, having climbed the winding flights of stairs from the bottom. She looked wildly about her for a few moments, and then gave a leap into space. Four hundred and thirty-four feet is a good deal of a jump, but she landed on the ground alive, making the greatest leap on record."

In the museum of the Peabody academy of science in this city, says the Salem *Museum*, there is an under jaw of the sperm whale, presented to the East India Marine Society in 1837 by Capt. J. B. Osgood, which is a much more perfect specimen than the one in the Nantucket Museum. It is sixteen feet eight inches long, and has fifty teeth, all in fine order, which is a better index of the age and full development of the animal than the length merely would be. The whale from which this jaw was taken was eighty-five feet long, and yielded over ninety barrels of spermaceti.

For staining bricks red, melt one ounce of glue in one gallon of water; add a piece of alum the size of an egg, then one-half pound of Venetian red, and one pound of Spanish brown. Try the color on the bricks before using, and change light or dark with the red or brown, using a yellow mineral for buff. For coloring black, heat asphaltum to a fluid state, and moderately heat true surface bricks and dip them. Or make a hot mixture of linseed oil and asphalt; heat the bricks and dip them. Tar and asphalt are also used for the same purpose. It is important that the bricks be sufficiently hot, and be held in the mixture to absorb the color to the depth of one-sixteenth of an inch.

The World's Fair

At New Orleans is now ready for visitors. The large exhibit of the Elkhart Carriage & Harness Mfg. Co. of Elkhart, Ind., attracts large crowds. They sell at wholesale prices to any one. See their advertisement in another column and mention this paper in writing for their catalogue.

A curious discovery was made recently when a lightning rod, which had been in place fifteen years embedded in soft clay, was removed. There was found attached to it a solid lump of iron ore weighing ninety-six pounds, supposed to have been produced by the conversion of the clay by the action of electricity.

Pasturage For Rent.

Nine hundred and fifty acres, well watered with springs, good four-barbed wire fence, 26 miles west of Topeka. Will be rented low to responsible party.
T. E. BOWMAN, Topeka.

New Rates of Postage.

On July 1 the following important changes will be made in the rates of postage:

1. Any article in a newspaper or other publication may be marked for observation except by written or printed words, without increase of postage.
2. All newspapers sent from the office of publication, including sample copies, or when sent from a news agency to actual subscribers thereto, or to other news agents, shall be entitled to transmission at the rate of 1 cent per pound or fraction thereof, the postage to be prepaid.
3. The weight of all single-rate letters is increased from one-half ounce each or fraction thereof to one ounce each or fraction thereof. The same increase of weight is allowed for drop letters, whether mailed at stations where there is a free delivery or where carrier service is not established.
4. A special stamp of the value of ten cents may be issued, which, when attached to a letter, in addition to the lawful postage thereon, shall entitle the letter to immediate delivery at any place containing 4,000 population or over, according to the federal census, within the carrier limits of any free delivery office, or within one mile of the postoffice or any other postoffice coming within the provisions of this law which may, in like manner, be designated as a special delivery office, that such special stamped letters shall be delivered between 7 o'clock a. m. and midnight; that a book shall be provided in which the person to whom the letter is addressed shall acknowledge its receipt; that messengers for this special delivery are to be paid 80 per cent. of the face value of all the stamps received and recorded in a month, provided that the aggregate compensation paid to any one person for such service shall not exceed \$30 per month, and provided further that the regulations for the delivery of these specially stamped letters shall in no way interfere with the prompt delivery of letters as provided by existing law or regulations.

Book Notices.

FRANK LESLIE'S SUNDAY MAGAZINE—For May opens with a vigorous article by Emily Pierce on "The Church in Mexico," in which the history and present position of the Roman Catholic Church in that country is graphically described. This article ought to attract wide attention. It is profusely illustrated. The wanderings of the Children of Israel in the Wilderness for forty years form the subject of the fifth article on Bible History. This article has nine illustrations. "Flowers at Funerals" by the Rev. Edward A. Rand, is a short but interesting discussion of the subject, and "Fagged and Fresh," by Leigh Norval, will please by its tender sentiment. "The Continental Sunday" by William Rossiter, reprinted from the *Nineteenth Century*, offers food for much thought. Some may consider it a model, others a warning. Dr. Talmage's sermon is entitled "Your Pedigree," and in his Editorial Comments he discusses "Dressing for Church," "The Spring and Cleanliness." The three serial stories are continued. The Sacred Musicians treat of Madame de Grandval and Prof. F. L. Ritter, of Vassar College, and there is an able article, with portrait on Frederick Chopin. Many of the illustrations are particularly appropriate to the Spring season, which, though long delayed, will surely come. The miscellany is, as usual, abundant and interesting. Published by MRS. FRANK LESLIE, 53, 55 and 57 Park Place New York.

Wabash Change of Time.

The new change in time of the St. Louis trains is a great accommodation to the traveling public. The morning train now leaves at 7 a. m., has an elegant Wabash dining car attached, serving breakfast out of Kansas City, arriving at St. Louis at 6 p. m., ahead of all other trains. The evening train, the Commercial, Business Man's and Tourist's train, does not leave until 7:35 p. m., giving ample time to get your supper at home or the hotel and go sailing into St. Louis next morning at 6:50, the first train in.

The solid Chicago train still leaves at 6:30 p. m. All trains are equipped with Palace sleeping cars, reclining chair cars and Royal dining cars, making the great Wabash the best route on earth. Call at Ticket office, No. 531 Main street, 1,040 Union avenue and Union depot.
N. H. GARLAND,
Passenger and Ticket Agent,
Kansas City.

A teamster in Maine says he can start the worst balky horse by taking him out of the shafts and making him go round in a circle till he is giddy. If the first dance of this sort don't cure him the second will.

Stewart & Boyle are having splendid success with pigs this season, and will have the finest lot for sale they have ever had. They shipped, a few days ago, a fine boar to Albuquerque, New Mexico, and a good one to Clear Water. See their ad.

Not long ago a United States bond, issued about 1819, was presented at the sub-treasury in New York. The interest on it had ceased over fifty years ago. It had come back from Europe through Baring brothers.

Save Your animals much suffering from accidents, cuts and open sores, by using Stewart's Healing Powder.

Horticulture.

About Fruit Growing.

The soil and climate of Kansas are very much like those of western Missouri. What is good farm doctrine in southwestern Missouri is good for the larger part of Kansas. Here is what a southwest Missourian says in the *Western Rural* on fruit growing:

Buy your trees from the most reliable nurseries. For fruit select ground well drained, if not so and the ground is too wet, drain it by plowing narrow lands and set trees on back furrow, and keep dead furrow open so water can run off. All fruit ground should be plowed deep, sub-soiling is best. That is, loosen sub-soil, but not throw on top of the ground. Set trees shallow. See that roots are spread even around the tree. Put fine, rich surface soil on the roots first, then bank up ground high enough around the tree to protect it from the wind blowing it back and forth. In May or June this mound must be raked from the trees and wash as I will direct below to keep borers out of trees. Lean trees to southwest toward the sun where the sun will be at 1 o'clock in the month of June, but be governed some from what side the trees are exposed to the hard winds, and head low to allow the branches to shade the trunk and the ground beneath. This is an important matter, for the summer sun scalds the bark and causes it to peel from the trunk, and more so in winter if not protected when the warm sun starts the sap on the southwest side. Then a sudden freeze will freeze the sap and cause the bark to peel from the trunk. Set trees close in rows running north and south. If apple trees are twenty-five or thirty feet apart, set a peach tree between the apple trees. A peach tree planted this way will pay for itself as a wind-break for the apple trees, beside the fruit. Many peach trees have borne \$5 worth of peaches in a year. And when the apple trees need the ground the peach tree can be headed to a small head, as peach trees should be cut back one-third of every year's growth, and when the apple tree needs all the ground cut the peach trees out of the way.

Peach trees are more subject to borers than apple trees, and ought to be protected with potash, coal ashes, or wood ashes, the latter being the best, placed close to the tree, as this is a good fertilizer. If not many peach trees are wanted and apple trees are, set young bearing apple trees between standard apple trees, such as Missouri Pippin and Jonathan. When six to seven years old girdle and summer prune, to cause them to make and mature fruit buds and bear heavy. Cut them out when the standard trees need the grounds. Mulching young trees is very beneficial, as mulching will keep the ground moist and clean, and will answer for cultivation. My only objection is, it causes the roots to grow too near the surface. Old hay, straw, corn stalks or any like material will answer.

Many orchards in this country are ruined by bad and too much pruning. Trees in southwest Missouri need less pruning than northeast. Too many prune too much in this Southwest country. Prune trees when young, and allow no tree to grow forked in your orchard. Two main branches diverging from each other at an acute angle, should not be permitted when the trees are young. Prevention is best, and a well formed head will not split down. Prune trees young, when it can be done with finger and thumb and knife. As there are no two trees alike, it is pretty difficult to lay down a definite rule in regard to pruning. We must survey the trees with our eyes, and good common sense is the best guide. If we want large ears of corn we must cultivate, and if too many stalks are in a hill we must pull up some stalks. And so if we want large, well matured and colored fruit we must prune. When pruning is neglected when trees are young, and when it can be done with finger and thumb and knife, and is done when limbs are too large, the natural equilibrium between the roots and top is destroyed, the body of the tree will come out in suckers and sprouts. If a limb is dead it must be cut off close to the tree. The only living limbs that should be cut off are the small ones that heal over and coming from the larger branches in the inside of the top, and those that cross each other and won't let the sun color the fruit, and hinder the pickers from picking the fruit. Water sprouts and small limbs can be cut off at any time,

when not frozen. Large limbs I prefer to cut off in June, as at that time the sap is not so thin as to run out and blacken the tree as in early spring. In June the wound will entirely heal over. If limbs are over two inches thick, wax over with grafting wax or paint, to keep from cracking and keep the water out until it is healed over. In this country if trees get bent to the northeast and are too large to straighten, and are not protected by limbs to shade the southwest side of the tree, they are of little value, but may pay a few more years by nailing a board on the southwest side.

I give the following recipe to keep rabbits, borers, sheep and mice from killing trees: Four pounds of sulphur, peck of lime slaked with hot water, old soap-suds, and tobacco (boiled). While hot add one gallon gas-tar and one-half gallon of crude carbolic acid. Stir well. For summer wash leave gas-tar out and add in place of it one gallon of soft soap, and for old trees with rough bark on use the water or soap-suds to slake the lime with. Make the wash the thickness you would make it to wash house or fencing. To keep rabbits from girdling, wash in late fall or about the time of frost, and as high as rabbits can reach. For summer, wash the last of May or June. If the miller has laid the egg, which produces the borer, this wash is death to the egg, and millers will not deposit their eggs in a tree thus washed with the wash described. Wash the trunk, branches and limbs as far as the rough bark goes. A man can wash from 200 to 300 trees a day, with a 40-cent flat paint brush. I would not do without this wash for one hundred dollars a year.

A very important consideration is the selection of varieties adapted to the various climates and soils. The science of horticulture can hardly be said to have any fixed principles, if in our experiments and investigations we assume nothing, but prove all things, and hold fast that only which is proven good. This is horticultural gospel. I seldom see a selection by our horticulturists as to what varieties will succeed best in their climate, by which we can benefit one another, and especially new immigrants. I will make a selection of apple trees as I would for myself if I had no orchard: Six Red June, medium red, juicy, tender, most excellent, early in long succession, hardy and productive. Four Early Harvest, medium, yellow, will not keep long after ripe; moderate grower and bearer. One Red Astrachan, large, very beautiful crimson, juicy; tree hardy, showy. If in Iowa, I would plant eight instead of one, here in Southwest Missouri. Four Keswick Codlin, large, pale yellow, best cooking apples; trees hardy, early, and profuse bearer. Five Sweet June, medium, yellowish, excellent, most superb sweet; trees upright, early bearer. Four Lowell, large, yellow, superb, profuse bearer. Six Maiden's Blush, medium to above, clear yellow and red, juicy, tender, and good; most popular of its season; tree early and excellent bearer. Four Rambo medium, striped; tree good grower and bearer. Four Grimes' Golden Pippin, medium or above; apple will keep till December. Ten Jonathan, medium or above, beautiful, bright red; bears early and abundantly; one of our best for family and market. Apples keep till December. Ten Missouri Pippins, medium, dull red, crimson striped; quality good; early bearer; keep until January. Eight Ben. Davis, for family and market; large, striped, snowy, flavor moderate, tree hardy, good bearer, and most profitable market variety; keep until January. Ten Rome's Beauty, large, striped, showy and early, good bearer; fruit drops in some localities; keep until January. Ten Willow Twigs, large, striped; tree hardy, splendid bearer, quality good; keep until March. Five Rawles Jannetts, medium with dull stripes; tree blooms late, inclined to bear every other year; keep until March. Twenty Winesaps, medium, red, excellent, no tree more esteemed and generally planted West: growth rapid, irregular, hardy, early and profuse bearer; keep until March. Fifteen White Winter Pearmain, medium, pale yellow and brown, mild, crisp, quality best for family use; tree hardy in timber soil, in prairie soil subject to blight, and would plant only five; keep until May. Five Shocklys, medium, red bluish; tree vigorous, good bearer, keep until May. Five Lawyers, large bright red; tree vigorous, slow bearer while tree is young; keep until May and June. Five Minklers, large stripes; tree very vigorous, regular bearer; keep until May. Ten Red Romanite, medium or below, bright red,

delicious, very productive; keep until June. Five Limber Twigs, medium or below, dull red, quality poor, good bearer, it has only its keeping quality to recommend it, and can be left on and under the tree until the first of December; keep until June and July. I could name more if space would admit. For market we do not want too many kinds. Ben Davis and Winesap bring us the most money, as buyers in the Southwest buy to please the eye and not their taste. Baldwin, Yellow Bellflower, Wagener and many other Western varieties will not succeed in the Southwest.

If I had had the knowledge fifteen years ago that I have now, it would have been worth hundreds of dollars to me. We can grow apples in Southwest Missouri for fifteen cents a bushel, and potatoes for thirty-five cents, and have to sell them for twenty-five to fifty cents, and apples twenty-five to seventy-five cents a bushel.

Five and ten years ago there was more money in raising cattle in this country than in growing fruit; but the profit in cattle is growing less as the wild prairie grass is failing or getting used up. Five and ten years ago apples sold from ten to fifty cents per bushel.

Plums can be grown successfully here if the selection is right and manuring is right. Plant the trees ten or twelve feet apart, and prepare ground as described above. Lean the trees to the southwest. Prune little or none. Cultivate two to three years, then sow in blue grass or clover. Let hogs run in the orchard to eat all curculio-stung plums as they fall. I have seen plum orchards bear good crops from five to ten years; but wind-fallen and curculio-stung plums were allowed to rot under them, and they are now worthless. Within a mile, on the same soil and locality, very good crops are produced every year; but hogs eat all wind-fallen plums. If not much wind, trees must be shaken twice a week. I believe one acre of plums is worth two acres of corn for hogs, and, in a manner no work, after trees are three or four years old. To prevent curculio smoke trees once a week with sulphur and tar. Another remedy is to sift slaked lime on trees after a rain or dew-fall, when the leaves are wet. This can be done with a sieve with a long pole for a stave. The tree wash recommended above at time trees bloom is very beneficial.

Poultry is a benefit in orchards, as they destroy many insects. Plums are too valuable fruit, and can be grown too successfully to be given to the curculio. Plums can be kept fresh right from trees if picked before they are too ripe and put under water in barrels or jars. They make fine jelly and preserves. A peach orchard should never go out of cultivation, and apple orchards when six to eight years old should be sowed in clover, and hogs and poultry permitted to run in it.

When I lie beneath the sod I do not want it said that I ate the fruit of trees planted by our fathers, and that I, in return, did not plant trees for my children and successors. I wish to leave this world better than I found it, and place on record that I have been here, that it may be said "He is missed: his place is hard to fill." The work of our hands, the bloom and fruit of trees and evergreens in winter will tell that we have been here. So we should plant fruit, which will give us pleasure and treasures, and shed their blessings on millions when we are no more.

Kansas Fruits.

At a recent meeting of the Douglas County Horticultural Society, a list of approved fruits for Kansas was voted upon and adopted. A committee of five was appointed to report a list to be recommended, and the following is the list of apples and stone fruits recommended for general cultivation in Kansas:

Summer Apples.—Early Harvest Red June, High Top Sweet.

Summer and Fall Apples.—Cooper's Early White, Early Pennock, Keswick Codling, Maiden's Blush, Lowell, Rambo, Ortley.

Late Fall and Early Winter Apples.—Jonathan, Grimes' Golden, Baldwin, Rome Beauty.

Winter Apples.—Winesap, Stark, Ben Davis, Missouri Pippin, Huntsman, Smith's Cider, Minkler, Janiton, Gilpin, Willow Twig.

Cherries.—Early Richmond, English Morello.

Peaches.—Amsden, Alexander, Old Mixon, Heath Free, Heath Cling, Hale's Early, Lemon Cling, Stump the World, Crawford's Early.

Plums.—Wild Goose, Miner, Green Gage, Yellow Egg.

Pears.—Duchess, Seckle, Bartlett, White Doyenne.

Quinces.—Orange Champion.

American Apricots.—Early Golden, Moorpark.

Russian Apricots.—Griesa, Byram, Dr. Evatt, Prieb, Smith, Remer.

Grapes.—Concord, Moore's Early, Elvira, Pocklington, Martha, Worden, Missouri Rising.

The committee, including the President and Secretary, offered the following list of small fruits, which was unanimously adopted by the Society:

Blackberries.—Kittatinny, Snyder.

Gooseberries.—Houghton Seedling.

Currants.—Red Dutch, White Dutch.

Red Raspberries.—Turner, Shaffer's, Reliance.

Black Raspberries.—McCormic, Hopkins, Souhegan, Smith's Iron-Clad.

Strawberries.—Crescent, Charles Downing, Miner's Prolific, Capt. Jack, Glendale, Windsor Chief.

Every farmer who reads the above ought to preserve the list. Douglas county fruit-growers know what they are talking about. What they recommend is good.

Evaporation of cane juice by means of hot air is proposed to take the place of boiling it for sugar and sirup.

Fellow Farmers:

I have a limited quantity of Jerusalem Artichokes, which I will sell at \$1.25 per bushel while the supply lasts. M. O. KEFFFE, Wheaton, Pottawatomie Co., Kas.

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The Home Circle.

Where Are Wicked Folks Buried?

"Tell me, gray-headed sexton," I said, "Where in this field are the wicked folks laid? I have wandered the quiet old graveyard through, and studied the epitaphs, old and new; But on monument, obelisk, pillar or stone I read of no evil that men have done."

The old sexton stood by a grave newly made, With his chin on his hand, his hand on a spade; I knew by the gleam of his eloquent eye That his heart was instructing his lips to reply.

"Who is to judge when the soul takes its flight? Who is to judge 'twixt the wrong and the right? Which of us mortals shall dare to say That our neighbor was wicked who died to-day?"

"In our journey through life, the further we speed, The better we learn that humanity's need Is charity's spirit, that prompts us to find Rather virtue than vice in the lives of our kind."

"Therefore, good deeds we record on these stones; The evil men do, let it die with their bones. I have labored as sexton this many a year, But I have never buried a bad man here."

—Truth Seeker.

Trifles.

What will it matter "in a little while" That for a day We met and gave a word, a touch, a smile Upon the way?
What will it matter whether hearts were brave And lives were true; That you gave me the sympathy I crave, As I gave you?
These trifles! Can it be they make or mar A human life? Are souls as lightly swayed as rushes are By love or strife?
Yea, yea, a look the fainting heart may break, Or make it whole; And just one word, if said for love's sweet sake, May save a soul!

A Talk About Gamers.

Superintendent Graham, of the Kansas Agricultural College, thus sensibly discusses the game problem:

The thought that our boys waste a great deal of time with no returns in playing at the games at present so popular among boys, when they could and would, with a little encouragement, get an equal amount of pleasure and a vast amount of profit from playing at games which contain suggestions of future usefulness, has long been forcing itself into greater prominence. Now, we believe that a boy can get just as much exercise, can develop the same set of muscles, and get as much enjoyment, in using a jack-knife as the boxing gloves; in swinging a hoe, as in swinging the Indian clubs; or in "pumping" a turning-lathe as in "pumping" a bicycle if it were only the "proper caper." That is, if the boy be shown that it is possible for him to develop the same amount of muscle and a much higher degree of skill in the sense that it is a training or more of his faculties, and one that will be of use to him hereafter, and still get an equal amount of pleasure from the handling of tools with a view to making something, than he at present gets from base ball, he is quite likely, after a trial of the two, to devote a little less time to ball and more to his shop. We bear no special antipathy to base ball, and mention it only as a representative of a class of vigorous games at present much indulged in, and think no one can blame the boys for engaging in it. Yet we do think that if some game or avocation in which the boy could engage, and at once develop his strength and his mechanical skill, were proposed to him in such manner as to make it popular, the results on the future men of our country would be an enormous interest on the small investment of labor required of each parent in changing his ideas of vigorous fun.

It is not work that the average American man fears. It is the loss of caste. The average office-holder works harder to get his office and much harder while he holds the office than would be necessary for a greater real success on the farm or in the shop. And why? Simply to maintain caste. Ministers, lawyers, doctors, teachers, politicians—everybody, should have what mechanical skill he possesses developed to the highest point possible with his opportunities. How many really good people fall from grace because, for lack of training, they strike the thumb nail instead of the ten penny. Everybody should know how to drive a nail, to saw a board, and to handle all the more common tools and implements used by artisans; and this knowledge should be gained by an actual use of the tools in constant practice until a fair degree of skill is acquired. It may be that you will never have occasion to use them; but when you

hire a navy to dig you a cellar, or a carpenter to build you a woodshed, your knowledge of tools and materials, gained during your play time it may be, will be of direct monetary value to you. And, then, if hard luck comes, as it may do to all, and finds you clear down, a failure in business maybe, you are independent. Your knowledge of tools will still insure you a living, at least till your luck turns.

Now, don't cut off the boy's fun, for you and I know that he will have little enough of it after he ceases to be a boy, but show him, as only you can, that there is rare sport in making his own bats, and making them just as nice, too, as those in the store; that an excellent fishing rod may be had for the making; that a home-made kite will soar as high and look as well as the cheap, gaudy ones in the store; that he can make a boat nearly as well, after a little practice, as can Rushton. Show him how to drive nails and saw boards properly and neatly, and if he fails in his first attempt, don't laugh at him and quote Ben Franklin to him. Encourage him to devote a part of his play time—it is your duty to see that this is liberally allowed—to the making of his own playthings or something useful or ornamental for mother, and you will greatly add to the boy's enjoyment of his boyhood life, and will double his usefulness when he can no longer be called a boy.

Personal Habits of Children.

If children are expected to grow into refined, cultivated people, nothing can be more important than commencing very early to train them into habits of gentle, sensible human beings. It may seem a very trifling matter to many mothers, whether her boy comes to the table with his hair neatly brushed, his finger nails cleansed, or his collar on awry or not; or whether the little daughter is taught to knock at her sister's door for admittance, or bursts right in, taking the elder one quite unawares. But these things are not trifling matters at all. Many worthy people who would not knowingly intrude upon others, or offend them in any way, are constantly, through lack of early training, committing offences against taste and propriety; for good breeding is like the aroma of the spice or the perfume of the flower—something that belongs to a person. It cannot be put on as a dinner dress or traveling costume can be, and taken off at pleasure.

Particularly should all the little personal habits which go to make up the sum total of neatness and propriety in children, be so ingrained in their early training as to become a part and parcel of themselves. A child does not like to use a tooth-brush with regularity, nor submit to have its nails evenly and regularly pared, nor its hair washed; but a child needs to be taught that these little matters are a part of its regular existence—no more to be neglected than eating when hungry, nor drinking when thirsty. Among the very wealthy who can afford to keep a governess, part of whose duty it is to specially attend to these little matters on the part of the children, they are not usually apt to be neglected; but in a large family where the mother is housewife, and, all too frequently, maid-of-all-work in addition, somehow or other the children are some times neglected. It may seem necessary they should be; yet of all places to slight duty, here is the very last surely to begin or even to end. They ought not for one single day to be so left out of sight, that their personal habits are not a matter of great moment to the mother. From the day the little one first comes into the home, it has a claim to attention which grows stronger and stronger all the time. If the infant does not eat and sleep properly, trouble in after life will ensue. If the little child bites its nails it may live to regret the habit. And taken in season, any habit can be broken or acquired at the will of the parent. In this matter of forming habits of personal neatness and order in the little ones, parents are very often very neglectful. It is a subject any mother may well take home to herself.

—The Mother's Treasury.

Womanly Modesty.

Man loves the mysterious. A cloudless sky and a full blown rose leave him unmoved; but the violet which hides its blushing beauties behind the bush, and the moon when emerging behind a cloud, are to him sources of inspiration and of pleasure. Modesty is to merit what shade is to a figure in painting—it gives boldness and prominence. Nothing adds more to female beauty than modesty. It sheds around the countenance a halo of light which is borrowed from virtue. Botanists have given the rosy hue which tinges the cup of the white rose the name of "maiden blush." This pure and delicate hue is the only paint christian virtue should use. It is the richest ornament. A woman without modesty is like a faded flower diffusing an unwholesome odor, which the prudent gardener will throw from him. Her destiny is melancholy, for it terminates in shame and repentance. Beauty passes like the flowers of the albatross, which bloom and die in a few hours; but modesty gives the female charms which supply the place of transitory freshness of youth.

Out in the misty moonlight
The first snowflakes I see,
As they frolic among the leafless
Limbs of the apple tree.

Faintly they seem to whisper
As round the boughs they wing,
We are the ghosts of the blossoms,
That died in early spring.

In The Kitchen.

Parsnip balls are excellent for an entree. Parboil six large parsnips and let them get quite cool, then peel them and grate them, beat two eggs until very light and mix with the grated parsnip, adding enough flour to give coherence to the mixture; flour your hands and make small flat balls. Have hot lard in a shallow kettle and drop the balls gently into it; fry them until they are well browned on both sides. Send to the table very hot.

A fruit layer cake is a delicious novelty in cake making. Take one cup of sugar, half a cup of butter, one cup and a half of flour, half a cup of wine, one cup of raisins, two eggs and half a teaspoonful of soda; put these ingredients together with care, just as if it were very rich cake; bake it in three layers and put frosting between—the frosting to be made of the whites of two eggs with enough powdered sugar to make it thick. The top of the cake may be frosted if you choose.

Sour milk is so little used since the advent of baking powder that few modern cooks know how to dispose of a cup of sour cream or milk; here is an old time and most excellent receipt for sour cream or milk cookies: two cups of sugar, one cup of butter, one of sour cream or milk, three eggs, one teaspoonful of soda; mix soft, roll thin. When the cookies are cut sift granulated sugar over them, and roll it in by pressing the rolling pin gently over the cakes, taking care not to flatten them too much.

For coffee stains try putting thick glycerine on the wrong side and washing it out with lukewarm water. For raspberry stains weak ammonia and water is the best. Stains of fruit on good table linen can be removed without injury by using the following with care: Pour boiling water on chloride of lime, in the proportion of one gallon to a quart of a pound, bottle it, cork it well, and in using be careful not to stir it. Lay the stain in this for a moment, then apply white vinegar and boil the table linen.

Rust can be removed from steel as follows: Rub the article with kerosene oil and leave it to soak for a day. Then procure fine flour of emery and mix with kerosene oil and scour the surface, finishing with rotten stone. To preserve from rust, heat the steel and rub paraffine on it, and when cold polish with a cloth dipped in paraffine. No steel articles should be kept in a cellar or damp place, but in a dry attic or closet. If they must be kept in a cellar they should be well coated with paraffine and wrapped in cloths or paper; oiled paper would be preferable.

Household Recipes.

Cure Fever and Ague.—One teaspoonful of hop tea, taken at the time of retiring three nights in succession, then omitting three, and repeating as before; continue at alternate seasons until nine teaspoonfuls of the decoction have been taken.

Sore Mouth of Infants.—Take a lump of common light brown sugar, jam it full of butter till it is mealy, then put a bit half as large as a pea in their mouths several times a day. If this is done from the day of their birth they will never have sore mouth, as I know by my own experience, and that of my mother before me.

Ointment.—An excellent glycerine ointment for chapped hands is made by melting, with a gentle heat, two ounces of sweet oil of almonds, half an ounce of spermaceti and one dram of white wax. When melted, remove from the stove and add an ounce of glycerine, and stir until the mixture is cold. The ointment can be scented with any perfume to suit the fancy. Keep it in wide-necked bottles.

Sore Throat.—Salt and water is used by many as a gargle, but a little alum and honey dissolved in sage tea is better. An application of cloths wrung out of hot water and applied to the neck, changing as often as they begin to cool, has the most potency for removing inflammation of anything we ever tried. It should be kept up for a number of hours; during the evening is usually the most convenient time for applying this remedy.

Frosted Feet.—Fifty years ago, according to the *Scientific American*, frosted feet, "the itching of which during warm weather toward spring," made their owner "almost wild," were cured by "thoroughly rubbing dry every night for about ten days with a cloth dipped in alcohol, and then holding them as close to the fire as could be borne for a minute or more." We have found coal oil applied twice a day one of the most effectual remedies. To relieve the intense itching of frosted feet, dissolve a lump of alum in a little water, and bathe the part with it, warning it before the fire. One or two applications is said to be a sure relief.

Apple Butter.

An exchange says of this article: True apple butter, an article that need not be ashamed to compare with most of the jellies and preserves usually found on sale in grocery stores, is made as follows: Twenty gallons of cider, made from good, sound apples, is boiled down to ten gallons. Then good, sound apples are pared and cored, and all bruised spots cut out, until we have from ten to twelve gallons, dry measure. These, when properly cooked, will make seven gallons of good, old fashioned butter. The stirring must be constant after the apples begin to go in, and the cooking will require about eight hours. Spices are added, say a half hour before the butter is taken off.

There is no getting over the fact that such butter costs all it will sell for, if we value our labor. The cider can be made of apples, which, though sound, are too small to sell in the market. Those to be cut in should be good enough for any market. Seven gallons of such butter in a small family, or fourteen in a large family put in stone jars and set away for winter and spring use, is a treasure not to be despised by any farmer's wife, and the labor will not be grudgingly given for the same another year.

There's a holy conviction that dwells in the heart,
A song that is sung in the soul,
And it says that real goodness alone can impart
The God-given power of control.
To be true to that voice with its wonderful force,
To be true is to walk in the Nazarene's course.
—Ella Dare.

Wants the Facts Known.

MR. EDITOR: I and my neighbors have been led so many times into buying different things for the liver, kidneys and blood that have done us more harm than good, I feel it due your readers to advise them, when an honest and good medicine like Dr. Harter's Iron Tonic can be had. Very truly,
AN OLD SUBSCRIBER.

No fixed quantity of cream can be depended upon for yielding a certain amount of butter. Cream varies according to the weather and feed. Sometimes it yields less butter than at other times, falling below one week and yielding more the next.

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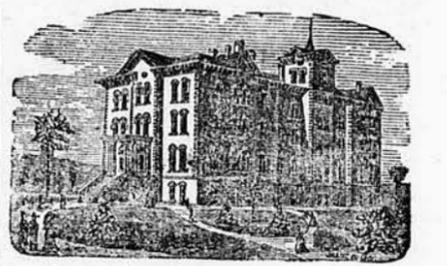
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The Young Folks.

He Wasn't There.

They were talking politics,
In a very earnest way,
And little Katie listened
To all they had to say.

They spoke about a neighbor,
An undecided man,
Poor little Kate looked troubled,
Then from the room she ran.

But presently returning,
She said, in tones intense,
"I've looked for Mr. Smith, papa,
And he isn't on the fence!"

Agriculture by the Original Inhabitants of America.

Women were the oboriginal "gar-te-gaids" or farmers, of North America, for the savage lords of the soil scorned tillage as does a modern shop boy, and passed their time in fighting or in fishing, although they never refused to eat the product of the soil. When a new field was to be cleared up in "wonne-squam-sauke," the squaws would take their hatchets (made of sharpened stone) and girdle the trees by bruising off a wide circle of the bark; "mo ni-e-jeeg-kwai-wag," as they called this employment. The next spring, twelve months after, heaping dry limbs and leaves around the decayed trunks, they would apply fire, and while the flames consumed the dead giants of the forests, and the heat killed the roots of the underbrush, the ashes would leave the soil mellow and in fine heat. A field thus tilled would be used by generations, thus proving the excellence of wood ashes as a fertilizer for Indian corn.

Great care was taken by the Indians to select for seed the best ear for "skamoon," which was their name for Indian corn, although they had distinct appellations for the white, the red, the yellow, and the black varieties, all of which they possessed, and kept pottage fish and flesh of all sorts, either new taken or dried, as shad, eels, alewives, or a kind of herring, or any other sort of fish. But they dried mostly those sorts before mentioned. These they cut in pieces, bones and all, and boiled them in the afore-said pottage. Also, they boiled in this ferment all sorts of flesh taken in hunting as venison, bears' flesh, beaver, moose, otter, or raccoon, cut in small pieces. They also mixed with it several sorts of roots, as Jerusalem artichokes and ground nuts, and other roots and pumpkins and squashes. Also several kinds of masts, as oak acorns, chestnuts, walnuts—these, husked and dried and powdered, they thickened this pottage therewith.

Melons were raised in great abundance, as were also gourds of all sizes, from the large "calabash" that would hold two or three gallons to the tiny receptacle for pigments used in painting for war. From the sap of the maple they made a coarse-grained sugar, which, when mixed with freshly pounded Indian meal and seasoned with dry whortle-berries, was baked into a dainty dish for high festivals. The dried meats of oil-nuts pounded and boiled in water, was their beverage at such feasts, and from the green wax of the bayberry they made candles with rush wicks, which gave clear light, and yielded a pleasant fragrance while burning. Several varieties of beans were raised with the corn; that the fall dish of "musick-quatush," or green corn, might be enjoyed. It was not, however, (like the "succotash" of our day), simply composed of corn and beans, for Goodkin tells us that "they frequently boil in this."

"Mishimin" in the Algonquin tongue, signified apple, although it is the opinion of some learned writers that the fruit was unknown before the arrival of Europeans. I have in my possession, however, several old printed compilations of early voyagers, each of which reckons apples among the early native fruits, and unless crab stocks were found I do not clearly see how the large orchards mentioned by the early writers could have been made productive so soon. Mr. Wolcott, a distinguished Connecticut magistrate, wrote in 1635 (certainly not more than five years after this colony was first planted): "I made 500 hogheads of cider out of my own orchard in one year." This would have been almost impossible had he been obliged to raise his orchard from seed, or even had he carried trees of such size as could have been transported through the trackless wilderness. The apple may not be indigenous to the soil of New England, and yet the Indians may have possessed it, as they did Indian corn, which undoubtedly came from the south, and which was never found growing wild.

After the spring burning, when the oaks began to leaf, the squaws would cultivate, or, rather, would root up the fields with the flat shoulder-blades of the moose, and then mark the future hills by making small holes (about four feet apart) with a rude hoe, the blade of which was a large clam shell. Into each hole they would put an alewife, caught in some adjacent stream, or a horse-shoe crab from the seashore, and on the stimulant drop and cover a half dozen grains of corn. The land thus planted was guarded against the depredations of the birds, and, as the corn grew, the earth was scraped around the stalks with clam-shells until the hills were two feet high, a mode of culture superseded by plowing, although some persist in laboriously following it at the present day. Generally the stalks grow six or eight feet in height, bearing two ears each, and we are told that there were eight rows, containing

thirty grains, or over, on an ear. Early in September the ears were plucked, leaving the stalks and leaves to enrich the ground, and were carried in backbaskets to their wigwams. There the corn was placed, unhusked, on frames resembling the fish-flakes of our time, under which a smoldering fire was kept up.

When the corn was thoroughly dried it was husked, shelled and packed in large birch-bark boxes, which were buried in the ground below the action of the frost. Sometimes, when they cooked this corn, it was soaked in lye until the hull came off, then dried again, pounded in a wooden mortar, and called "nausamp," which was boiled with venison fat and a bit of dried salmon to give it a flavor. "Omonoe" was the dried corn simply cracked in a stone mortar and then boiled; "suppaun" was the corn-meal, sifted through a basket, which they baked into cakes on flat stones. The warriors and hunters, however, when away from home, subsisted upon simple parched corn, a supply of which they carried with them. Roger Williams speaks of having "traveled with near 200 Indians at once, near 100 miles, through the woods, every man carrying a little basket of this at his back, sufficient for one man three or four days. They call it "nocake."—*Boston Budget.*

Wasps and Hornets.

Mr. Burdette does not "set up" as a scientific man, we believe, but when he sees a mistake in describing the habits of familiar insects, he knows it. In the following passage he gives some useful information, drawn from experience, and sets right a popular poet:

Ella Wheeler's latest poem is "The Room Beneath the Rafters," in which she declares she "saw the hornet come forth from his mud-walled hanging house."

We don't intend to criticize Mrs. Wheeler's poetry, but when she calls a mud-wasp a hornet, we object. A hornet's nest, Ella, is made of home-spun paper, and is built around two hundred and sixty-eight thousand hexagonal holes, there being, when the nest is in executive session, about five hundred hornets to the hole. The nest grows, in a good season, to the size of a bushel and a half measure.

Moreover, people do not "lie in the trundle bed" and watch the hornets play, as you say you did. Oh no. When they happen to come unexpectedly upon a hornet at play, they turn and fly, or would fly if they could trade off their boots for a pair of wings.

The chief industry among hornets is the manufacture of probes and bodkins. Hamlet speaks of taking his quietus "with a bare bodkin." Now, when a man takes about three-quarters of an inch of a hornet's bodkin, it doesn't make his quietus. No, no; it makes him jump and holler until you can hear him a mile, a mile and a half, or two miles away.

How Floor Oilcloth is Made.

In making floor oilcloth, the process requires almost as many manipulations in the way of painting and polishing as a fine carriage body. The body of all floor oilcloth is burlap. The material is first sized, which is done by treating it to a saturation of dissolved glue. It passes then through fifteen heated wire rollers, which not only dries it, but presses the glue water into the porous material and removes all inequalities of surface. It then passes to the paint rooms to receive its first and many subsequent coats of paint, the principal ingredient of which is ochre. The paint is liberally put on, and the cloth, after passing under a roller to press out superfluous paint, is run on long racks through a room in which are heated steam pipes. After remaining on the racks a prescribed number of hours, the cloth is run through a machine where it is pumice-stoned down to a perfect smoothness. It then receives a second coat of paint, and is again pumice-stoned, and so on until the requisite number of coats are put on on both sides. The well prepared material now goes into the hands of the printer. This work is all done by hand, and it requires considerable experience on the part of the workmen to make a good job. Every color requires a second impression, the blocks in the hands of the workmen being about eighteen inches square, and great care must be taken that the block is placed in the proper place, as a hair's breadth displacement would show; also, that the proper blocks are taken up in their order. After being well dried in steam-heated chambers, the now nearly finished piece of goods goes to the varnishing machine where a number of arms with brushes attached, and worked almost in exact imitation of a painter's are passed over it, giving it a complete and evenly distributed coat, when, after drying and trimming, the article is ready for market.

Found His St. Bernard.

A sleek-coated St. Bernard mastiff stood up on his hind legs against the desk of the Thirtieth Street Station and barked "How d'ye do?" The dog, as he stood, was exactly as tall as Policeman Kerman, who is nearly six feet high. That night Professor Echter, a German sculptor, rushed into the station, and in great excitement hugged the dog around the neck and talked to him in German. "The dog is mine!" the Professor cried. "He is worth \$500. He's got a gold medal from the Berlin Humane Society for saving twenty-five lives." The dog and the Professor went around to the flat together. The dog put up his paw and rang the janitor's bell. When the janitor pulled the door

catch the dog pushed the door open with his nose and bounded up stairs and stood at the door. The Professor proudly showed the big gold medal and the certificate of the Humane Society. It attested that the dog rescued twenty-five people who were upset some years ago from a little pleasure steamer on the Rhine.—*New York Sun.*

Three Panthers.

Pioneer life trains a woman as well as a man to be brave, cool, and self-possessed. The wife could not be an adequate helpmeet to her husband without these personal traits, especially when called upon to aid him in such a way as a woman was called upon not long since in California. A farmer had reared three panthers—an unusual occurrence. The farmer, Mr. Barber, had retired with his wife for the night, but was aroused by the tramping of feet. What followed is told in *Forest and Stream*:

Mr. Barber remarked to his wife that the cattle had probably come down from the mountains, and then he went to the door. His dogs rushed by in a terrific manner, and he could plainly see by the dim light of the moon three huge California lions; they were skipping and leaping around playfully until the three dogs came upon the scene, when, making two or three leaps, they all three ascended a large oak tree standing about thirty yards from the door.

With the exception of the small children, Mr. and Mrs. Barber were alone; but something must be done, and for Mr. Barber to go out alone with his torch and rifle seemed useless, so Mrs. B—bravely proposed taking the torch, and getting one in readiness. Mr. Barber, after examining his faithful old rifle, started for the scene.

The leaves and darkness prevented the lions from being seen readily, and it was necessary to get close to the tree, when Mr. Barber saw three pairs of eyes which shone like balls of fire. He also saw that one of the lions was about to spring upon his wife.

He raised his rifle and sent a leaden messenger through the animal's back, and he fell helpless at Mrs. Barber's feet. The faithful old dog, Hunter, was soon holding him to the ground.

The flash and noise of the rifle excited the remaining two lions, and one of them, before Mr. B—could shoot again, sprang at his wife, missing her and striking the ground with great force.

He stopped for a moment, but the old dog Hunter was upon him at once, and he fled to the hills with lightning rapidity, the dogs following.

The third and last lion jumped from the tree in another direction and made good his escape. The dogs brought to bay the one they followed, in a thicket of chaparral, at the base of the lime rocks, and Mr. Barber and wife concluded to follow.

Arriving at the scene, they found the brush so thick that it was impossible to see the animal. He was fighting the dogs, and the brave old Hunter ventured too near, and soon returned with some fearful wounds.

Mr. B—made a large fire, which drove the animal from the brush and down towards the river, with the dogs in pursuit. He was again brought to bay, this time where the brush was not so thick, and while the dogs kept him busy, Mr. Barber crawled on his hands and knees to within a short distance of him, and as Mrs. B—held the torch, he fired, when the lion and dogs went rolling down the hill together.

Thinking that he was fatally wounded, Mr. Barber and his wife returned home. At daybreak Barber returned to the scene of conflict, but the dogs were so badly wounded that they refused to follow. He found the lion dead. He weighed one hundred and fifty pounds and measured about nine feet. The other, which was a kitten, weighed one hundred and twenty pounds. The one that escaped came around the next evening, but the dogs had lost all desire for lions, and he was allowed to go his way in peace and safety.

Hot Roasted Peanuts.

Here is the chance for any smart country boy to revel in the luxury of peanuts, at small cost. He can always have a large supply on hand against picnics, circuses, grange meetings, and other fashionable gatherings, and might find them the open sesame to making money. Cultivate the plants, and raise them at your own door. Any dry soil will answer. Let the ground be well pulverized, leaving an even surface. Get fresh nuts; break them out of the shell and plant, about the time of planting beans, two inches deep, in hills three feet apart, and the rows five feet apart. In order to have straight rows, use a line. Plant two kernels in a hill, but if both come up transplant one of them, without in any way disturbing another. As soon as the plants are up, hoe and keep them clean. When they begin to run and show blossoms, cover the vines, blossoms and all, with about an inch of earth, taken from between the rows. With good cultivation the vines grow fast, and must be covered, always leaving the tip of the runner just peeping out of the ground. As soon as the leaves are touched with frost dig the nuts, leaving them clinging to the vines. Now the nuts must be well dried. This can be done by hanging up the vines, or stripping them off and spreading them on a floor, or any way so that they will not mould. Keep them from rats or mice. They will yield an average of over a quart to each plant. There are two varieties of peanuts one called red and the other white. We would by all means prefer the cultivating the white, because they stand first in the market.—*Ex.*

Nearly Murdered by an Eagle.

Thomas Jones, aged 12 years, had a very severe battle with an eagle in Tyaskin District a few days ago. The eagle attacked the boy while he was crossing a field, and buried its talons in the fleshy part of his leg. The eagle was shaken off, but again made an attack at the boy's face, tearing the flesh off in several places, tearing off one of his ears, splitting his nose and nearly scalping him. After a gallant fight the boy succeeded in getting hold of the bird's neck and choked it to death. The boy is in a precarious condition. The bird measured eight feet from tip to tip.—*Baltimore Sun.*

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The average condition of winter wheat in Illinois April 1st was 58 in a scale of 100.

Let every farmer declare war on weeds, and prepare to move on the enemy's works immediately.

A secret organization was recently started in Chicago for the purpose of preventing fraud at elections.

Hard ground ought never to be worked when it is wet. And the rule applies to all kinds of land except that which is very sandy.

Washington monument was three times struck by lightning during a storm one day last week and was in no way injured.

The prospect of war between England and Russia has already affected grain and provision markets in this country. On the 9th inst. wheat ran up 5 cents a bushel in Chicago.

The best time to destroy weeds is when they are young. Mow them down in the meadows and along the roads as fast as they grow large enough to cut. In the corn fields, cultivate often and well.

Within the last few days we have read reports from all the wheat growing States concerning the condition of wheat, and the general opinion is that half a crop is as much as the country will grow in 1885.

A friend writes us from Shimersville, Lehigh county, Pa., that he fed strong cheese to his poultry with very good results. The cheese was too strong for the market, and it occurred to him that it would make good chicken feed.

An Iowa farmer, in quest of information concerning the relative value of cooked food for stock, says that he has been experimenting some in the matter of grinding feed and he finds the cost to be about 5 cents a bushel for grinding corn.

As spring opens trade improves and business failures decrease. The last reported week's failures in the United States was 189, forty less than those of the preceding week. Commercial reporters say that failures are lessening in all sections of the country excepting New York city, and assignments are few and unimportant.

Three druggists of Topeka have been arrested and put under bonds for appearance at court for alleged violations of the liquor law.—The Sheriff of Leavenworth county has given notice that saloons in that city must be closed up for good by May 1.—The same day is to be the last for grog-shops in Atchison.—Notice has been given to them at Dodge City, also. Guess prohibition will prohibit after a while.

When to Fell Trees for Timber.

Like the chess question it seems that people will never agree about the best time to cut trees for timber. At a forestry convention recently held in Moscow it was stated that experiments conducted under commissions from the Russian government had shown that the best results have followed the cutting when the bark peels freely—about the last of June in that country. The bark is stripped off as far up the trunk as it is to be used, and in a few days afterwards the tree is sawed or split and the pieces dried as rapidly as possible.

Prof. Budd, who relates the foregoing, adds a little of his own experience in this country. Poles of quaking asp were cut and peeled in June, and then nailed to posts for fencing. These have lasted fifteen years. Others cut in winter rotted in three years. Poles of box elder cut, peeled and dried, and set as posts for fences or sheds, have lasted sixteen years; while the same kind used for the same purposes rotted in four years when cut in winter and set green.

This is worth testing. In our own personal experience we never observed any difference in the lasting qualities of the same kind of wood cut at different times, provided it was well seasoned and not wind-shaken or worm-eaten before put to use.

Soft and porous woods are more easily affected by moisture in the earth than hard and dense wood, because it absorbs more water. We have known yellow locust posts to last until the tops were worn out by the action of the atmosphere. As this is written several cases come to mind. One instance was of posts of that kind of timber that we helped to remove about forty years ago. They had been in position about forty years. The parts above ground were more worn than the parts which had been in the earth. Another case was of posts that had been set during the time of the Revolutionary war, and they were being removed about the year 1848 because the weather had so much worn them that at the mortises where the rails had been held the wood in some cases was actually worn away from the hole. From appearances the parts in the ground would have lasted another generation or two.

Catalpa has a good record. The old General Harrison farm in Indiana has posts now standing that were set when the General lived there. A few of the posts were removed a few years ago. A piece of one of them lies before us as we write. But nothing is known as to the particular time in the year when the timber out of which any of these posts here referred to was cut.

It is said by persons who have experimented in the matter, that soft wood, as linn, for instance, will last in the ground as well as any other kind of timber, if it is thoroughly seasoned and then saturated with coal oil before setting. A year ago we published a statement of this kind. A farmer had experimented with bass-wood posts and at the end of ten years they were perfectly sound. He did not state what time or in what sign the timber was cut. He simply got into the ends of the posts that were to go into the ground all the oil they would retain and then set the posts.

The old-fashioned Pennsylvania farmers generally cut their post and rail timber in the light of the moon in January and February. The latter named month was preferred. We can recall many discussions among them on this subject, and summer cutting of timber was generally condemned except in cases where it was intended to head off the sprouts that commonly grew from stumps of trees cut in winter. In such

cases the trees were usually cut and split into cord-wood and sold.

Until more is known on the subject we would cut timber trees in midwinter always. The trees are at rest then and less liable to warp, and they are more easily dried. But the subject is of great importance. If a few years may be gained in the duration of timber by cutting the trees at a particular time in the year, people ought to know it.

Sheep Business.

A representative of the KANSAS FARMER conversed with a number of sheepmen in the western part of the State recently. They talked like men who understood their business and expressed hope in the sheep industry. While they are not making as much money at the present time as they have in the past, they still felt that with the same capital they could hardly invest it to better advantage in anything else. The loss of sheep during the past severe winter has not been as great as formerly.

The enterprising and intelligent wool-grower has learned many useful things in the management of sheep, especially in feeding and breeding. They have found that it is not expedient or profitable to buy highly-bred Merino ewes and bring them to western Kansas for breeding purposes and use the class of high-grade or ordinary pure-bred rams as formerly; but instead that it is more profitable to buy good Colorado ewes or those that have been bred up from Mexican sheep. In this way they get ewes that have size of carcass and strength of constitution and also make better mothers for the lambs. Upon this class of ewes it pays to breed the best class of thoroughbred bucks that can be secured from the best Eastern breeders. The lambs produced by this cross makes the profitable sheep of western Kansas. They have better size than the common grade Merinos and have a decidedly more vigorous and stronger constitution, resulting in much less loss with the same care during the winter and raise a much larger per cent. of lambs from the same number of ewes; besides being better grazers on the range, this class of sheep are of sufficient size to bring in some needed cash from the sale of the wethers and aged ewes for mutton, a source of revenue for which the class of sheep shipped in from the East were comparatively of little value. The writer is also informed that the wool produced from this class of ewes brings just as good price as the other, in fact at present is preferred.

The indications are favorable for a rise in the price of wheat within a short time. It is evident that the crop in the United States this year will be short. The acreage is not as large as it was last year, and the yield will not be as large per acre. In addition to that there is prospect of war in the East. France and China are now at war. That will probably not last long. But England and Russia are getting into trouble, and the outlook for a war of great dimensions in that quarter is full of interest. Already fighting has been done between Afghans and Russians, and it is about the Afghan boundaries in part that the trouble is brewing. If those two nations get to fighting it will not stop short of a year or two, and may finally provoke a general war among European nations. In any event, wheat will be worth a good deal more in August next than it is now, or we miss our guess.

Please do not forget that in order to get the best out of tame grass nothing should be done with it the first year but to mow it off as fast as it or the weeds grow high enough to cut. Let all the stuff lie as it falls from the machine.

Civil Service Rules.

As matter of special interest at this time we give the methods of making appointments to Government clerkships under the civil service rules. Since July 1, 1883, no original appointments have been made in the clerical force of the several departments, except of persons certified to the appointing power by the Board of Civil Service Commissioners.

A Washington correspondent of the Topeka Capital describes the work very well and briefly. He says that whenever a vacancy by death, resignation, removal or promotion, occurs in the classified force in any of the Government bureaus, the chief clerk thereof by letter informs the Civil Service Commissioners of the fact, with the request that as provided by law, they at once certify to him the names of four persons from the list of those who have successfully passed the required examination, from which a selection will be made. The Secretary of the Commission will, thereupon, make said certification, giving the name, age and State of the four persons certified.

The chief and appointment clerk of the department having agreed upon one of the names, he is at once notified by mail or telegraph by the Civil Service Commission, that he has been designated for appointment to a clerkship in — Department and requesting that, if he desires the position, he report in person for duty, etc.

Upon reporting to the Department the person selected receives a conditional appointment for the probationary period of six months, when, if found satisfactory to his superior officers, his appointment is made absolute. The original appointments are usually made to the \$900 class, for when a vacancy in the higher grade occurs in any of the departments, it is the universal practice to promote up from the lower grades, and thus leave the actual vacancy in the \$900 or \$720 class, to be reported to the Civil Service Commission as above.

This being not only the "situation" but the law, persons of any political party, or ladies, having no political affiliation desiring to enter the clerical service of the Government, can no longer be aided or benefited by "political influence" so called. It is only necessary that the person successfully pass the civil service examination, and *bide his time*, as there are probably upon the books of the Commission more names of those who have already passed and are eligible to appointment, than will be required for the ensuing year at least, especially in view of the contemplated reduction of the existing clerical force, by the present administration.

To get an old road into workable condition, cover it with a thick mulching of hay or straw, and let it lie until next spring, and plow it as deep as you can, and cover another year with a light mulching. Or, cover thickly with good barn-yard manure and put on team enough to break the ground up six or eight inches deep, getting as much of the manure as possible covered and mixed up with the clods. Then, if you have a roller, or clod-crusher that will do the work, go over it and break the clods as fine as you can and let lie a year. Repeat the next year.

There seem to be three "oldest churches in America"—one at Tadousac, on the St. Lawrence, one at St. Augustine, Florida, one at Espanola, New Mexico. Each has its champions, and the writer of a paper in the forthcoming May Harper's, on "Espanola and its Environs," naturally favors the latter. The paper itself, written and illustrated by Birge Harrison, is an interesting study of that old Mexican town and of the pueblos in its vicinity.

Interest in the question of woman suffrage is constantly increasing. Those who desire to be well informed on the subject will find the *Woman's Journal*, of Boston, a valuable help. It is edited by Lucy Stone, Henry B. Blackwell and Alice Stone Blackwell, with Mrs. Julia Ward Howe, Mary A. Livermore and others, as occasional contributors. Beside the special subjects of which it treats, it has always a story, a children's column, and poetry. Specimen copies free.

There is to be a National Commercial convention May 19, 20 and 21, at Atlanta, Ga., to consider matters pertaining to the general business interests of the country, as commercial and reciprocity treaties, national bankruptcy, coinage of silver, railway transportation, and any other kindred matter that may be agreed upon. The Governors of States and two delegates by each of them appointed, and business men from commercial organizations and competent men from cities and towns, will be the delegates.

Half-breeds and Indians in Manitoba are in organized rebellion against the Canadian government. They say that white men are taking lands that belong to the Indians. They claim 240 acres apiece under treaties, but land speculators are taking up such large tracts that little is left for the rightful owners. Troops have been sent against them, but not effectively. A man named Riel, a half-breed, is the leader. He is an educated man. He graduated at one of the Ontario colleges, and is said to be naturally smart. There are enough of his class of men in the movement to make it very formidable. They add to the savage instincts of full-bloods an extended knowledge of the arts and strategy of white men.

A California farmer tells how he made the best hog feed: I discovered two years ago the greatest secret in hog feeding that I had ever had. The feed was nothing new. It was nothing more or less than ensilage, made of alfalfa. I found that young hogs grew fatter on it in the winter time than on any other feed I could give them, and were always healthy. Last April I sold 400-pound hogs in the San Francisco market that had never eaten a pound of grain, and nothing but alfalfa and ensilage made of alfalfa since they were pigs until twenty days prior to slaughtering, when I gave them a few bushels of corn each to harden their flesh. They were no fatter after eating the grain than when they left the ensilage, but it made their flesh a little more solid.

The Legislature of Indiana recently passed a bill for preventing gambling at county fairs. There ought to be such a law in every State. The bill passed the House and failed in the Senate, but the latter body reconsidered its action and then passed the bill by a vote of 36 to 11. The *Indiana Farmer*, referring to the discussion of the bill, says that the people should know what influences are used to decoy their children and friends to the gaming table and start them on the road to ruin. Farmers should withdraw their patronage from fairs whose managers for the sake of a license fee would imperil the morals of the community. It then adds that one Senator declared that it would be the ruin of some of the fairs in his section of the State. He also said that the district prosecuting attorney in his own district was pledged before nomination that he would not prosecute gamblers carrying on their business at fairs. He believed that other prosecutors were under similar pledges, but he knew it to be true regarding the one in his own district.

He also stated that he had been requested by fair managers to oppose such a bill as this if presented. This shows the kind and strength of influences brought to bear against legislation to protect the young people against the contagion of the gaming table.

The Wheat Fields.

It is well to wait patiently and long on every wheat field, so as to be satisfied as to the probable yield. If there is not enough growing to justify the expectation of a fair crop, it may be better to plow it up for corn, or sow clover and timothy or orchard grass on it. The writer of this once was tempted to plow up a wheat field and plant it to corn; but on suggestion of an older and better farmer, he let it alone. The wheat grew in bunches or tufts, and the spaces between them were so large that when the crop was cut with a grain cradle it was very difficult to keep the scythe steady. It bounded over the bunches as if they were hazel brush. The yield of wheat was a trifle over 250 bushels on a ten-acre field.

That was a good lesson, and we profited by it. If there is root enough left in the spring to grow vigorously it will stool surprisingly. But where there is nothing left to grow, the ground ought to be used for something else—corn, flax, oats, grass or sorghum. But be sure about it, because, in addition to all questions of labor, ten bushels of wheat this year, if we are not very much mistaken, will be worth as much as twenty bushels were last year.

Railroad Liquor Traffic.

Kansas railroad companies, having considered the provisions of the amended prohibitory law, agreed upon rules for its observance and issued the following instructions to agents:

1. All consignments must be to a party having a permit to sell liquors as provided by the law, or to individuals for their own use.
2. All freight charges must be prepaid through to destination.
3. The shippers to assume all risk of damage of loss by reason of delay in consequence of said law; this condition must be inserted in all bills of lading or receipts to connecting lines.
4. Receiving agents of lines signing this circular will not receive any consignments of liquor to stations in Kansas either from shippers or from connecting lines, except in strict conformity with above instructions and conditions, and will receive same at stations within the State of Kansas only from persons who hold legal permits.
5. Delivering agents in Kansas will only deliver to such druggists as have permits, a certified copy of same to be filed with agent for each delivery so made, or to private individuals on their depositing with the agent an affidavit for each consignment, stating that said liquors are for their own personal use and will not be sold in violation of the law.

Black-leg Remedies.

At the Ellsworth Farmers' Institute last month, D. B. Long gave his remedy for black-leg: To mix sulphur and saltpeter with the salt fed to the animals. The cause of black-leg he thought was the rapid change of young cattle—too rapid change of diet and condition—out of proportion, whereas, if stock is kept growing all the time there is but little danger of black-leg.

J. F. Crofoot drenches the sick animals with large doses of Epsom salts.

A scientific exchange says that instead of oil, which thickens and smears the stone, a mixture of glycerine and spirit is recommended. The proportions of the composition vary according to the class of tool to be sharpened. One with a relatively large surface is best sharpened with a clear fluid, three parts of glycerine being mixed with one part of spirit. A graver having a small cutting surface only requires a small pressure on the stone, and in such cases the glycerine should be mixed with only two or three drops of spirit.

Inquiries Answered.

The Mississippi Valley Horticultural Society has been changed to the American Horticultural Society. W. H. Ragan is Secretary, Greencastle, Ind.

COYOTE BOUNTIES.—The law authorizes bounties for killing coyotes, but not for killing rabbits. That is our memory of the law. The book session laws has not been published.

We do not know of any better work on diseases of horses than "Jennings on the Horse and his Diseases," price \$1.75. It may be had at the book establishment of T. J. Kellam & Co., Topeka. Mention this paper.

ROAD LAW.—At the last session of the Legislature the road law was amended so as to place the roads of a township under control of the township officers. The work is to be done under their direction by labor paid for out of taxes raised for the purpose.

Muck is the decayed mosses and other plants of old swamps; it is known in the dried condition as peat, and in its decay renders the soil free, but has little manurial value itself. Acting like a sponge, it can take up and hold the ingredients of liquid manures so as to render them easily saved and transported to the soil. Coal is a similar article exposed to high temperature and great pressure for ages. Forest leaves or grassy sods, decayed, make a good substitute. Certain plants, as Azaleas, do best in peaty soil, and it is sold in most plant stores by the barrel.

TANNING SMALL SKINS.—A correspondent of the *Country Gentleman* gives this recipe: "Clean off all the flesh and fatty matter on the flesh side, after which wash that side with a strong lye made from wood ashes, and follow that washing very soon with one of sperm oil. Rub such parts as are not soft enough until they are, and the work is done. Skins of animals of the squirrel size may be tanned in from five to ten minutes; of the cat and rabbit in ten to fifteen; lambs' in fifteen to twenty, and calves in thirty minutes. The lye must not be allowed to work too long, or it will consume the fibre, and, eating through the skin, will loosen the hair. The design is to have the lye consume or destroy the gluten only, and to use the oil to preserve the fibre and hair, all which will be realized if the lye and oil are properly used. Rubbing the hair with dry sawdust will cleanse it and give it a bright, glossy appearance. After a sheepskin has been stripped of its wool, it may be made by this process fit for strings for sewing belts, etc., being as strong as rawhide. If hung in a dark cellar, it will put on the yellow color obtained by the usual process."

TO TAN SHEEP-SKINS.—We have answered this question several times recently. Here is a recipe we find in an exchange: "For mats, take two long-wool skins, and make a strong suds, using hot water; when it is cold, wash the skins in it, carefully squeezing them between the hands to get the dirt out of the wool, then wash the soap out with cold, clear water. Then dissolve alum and salt, each a half pound, with a little hot water, sufficient to cover the skins, and let them soak in it over night for twelve hours; then hang over a pail to drain. When they are well drained, spread or stretch carefully over a board to dry. When a little damp, have one ounce of saltpetre and alum pulverized, and sprinkle on the flesh side of each skin, rubbing in well; then lay the flesh sides together, and hang in the shade for two or three days, turning the under skin uppermost every day until perfectly dry, then scrape the flesh side with a blunt knife to remove any remaining scraps of flesh. Trim off projecting points; rub the flesh side with the hands, and they will be very white and handsome, suitable for a door or carriage mat. They also make good mittens. Lamb-skins or even sheep-skins, if the wool be trimmed off evenly to a half or three-fourths of an inch long, make beautiful and warm mittens for ladies or gentlemen, and the girls with a little practice can make them."

The prospect is that the Sterling sugar and sirup works will work as much cane this year as they did last. Mr. W. P. Clement writes to a St. Louis paper: "The demand for sirup is better for the time of year than ever since I have been in the business. We have threshed our cane seed, which turned

out 7,000 bushels, saved from 325 acres of cane. Balance of crop fed out without threshing; seed half sold and shipped. The demand from stockmen is better than ever, they having found that its value is about double anything else that can be grown for a fodder plant."

Nearly two inches of snow covered the ground in central Illinois on the 9th inst.

THE MARKETS.

By Telegraph, April 13, 1885.

STOCK MARKETS.

Chicago.

The Drovers' Journal reports: CATTLE—Receipts 7,401, shipments 2,800. Market slow and dull; prices a shade lower. Stock-ers and feeders 3 4/8 to 5 1/2, Texans 4 00 to 5 00. HOGS—Receipts 18,000, shipments 7,000. The market opened steady and closed 5/16c higher. Rough and mixed 4 45 to 4 60, packing and shipping 4 60 to 4 85. Light 4 45 to 4 60, skips 3 50 to 4 30. SHEEP—Receipts 4,200, shipments 2,000. The market was steady and firm. Inferior 3 00 to 3 75, medium 4 00 to 4 25, choice to extra 4 50 to 5 00. The Drovers' Journal special Liverpool cable reports fair supplies of English cattle and cattle from the continent, and large supplies of American, but with a good demand. Values are stronger, showing 1/2c advance. Best American steers 14 1/2c dressed.

St. Louis.

The Midland Journal reports: CATTLE—Receipts 2,100, shipments 900. Butchering grades active and firm, but shipping steers slow and rather weak. Exporters 5 20 to 5 75, good to choice 5 20 to 5 30, fair to medium 4 65 to 5 10, butchers' steers 4 25 to 4 80, cows and heifers 3 25 to 4 25, corn fed Texans 3 75 to 4 50. HOGS—Receipts 7,500, shipments 4,900. The market was easier but not lower. Light shipping 4 45 to 4 55, packing 4 30 to 4 50, butchers 4 50 to 4 75. SHEEP—Receipts 1,600, shipments 800. Market firm with good demand for desirable grades. Fair to medium 3 25 to 3 75, good to choice 4 00 to 4 50, extra 4 60 to 4 75.

Kansas City.

CATTLE—Export steers 5 20 to 5 40, good to choice shipping steers 4 85 to 5 15, feeders 4 00 to 4 50. HOGS—Market steady. Lots averaging 146 to 297 lbs sold at 4 20 to 4 45. SHEEP—Market steady. Fair to good muttons 2 50 to 3 25, common to medium 1 50 to 2 25.

PRODUCE MARKETS.

Chicago.

The day on 'change was characterized like the closing one of last week by heavy transactions and the highest prices known to the trade for nearly a year. The early news from London was considered very ominous of war, which view appeared to be reflected in the opening quotations for English consols. The wheat market opened fully 2c over Saturday, and rose 1/2c additional, tremendous amounts being bought and sold at an advance, with a stiffening of consols.

WHEAT—Excited and higher. The market opened 2c higher, rallied 1/2c additional and fell back again to opening, rose again to outside figures, then declined 2c and closed 1c over Saturday. Sales ranged, April 85 1/2 to 86 3/4c, May 89 1/2 to 91c.

CORN—There was a very large speculative trade, and prices early advanced 2 1/2c, but fell back 1 1/2c, rallied, closing 1c higher than Saturday. Cash 42 1/2 to 46c, April 43 to 44 1/2c.

OATS—There was an active speculative trade and prices ruled strong and market closed 1/2c over yesterday. Cash 31 1/2 to 32c, May 34 1/2 to 35c.

RYE—Firm and higher; No. 2, 66c.

BARLEY—Nominal.

St. Louis.

WHEAT—No. 2 red 99 1/2 to 1 00, May 1 02 1/2 to 1 06.

CORN—Cash 44 1/2 to 45 1/2c.

OATS—Cash 86 to 87c.

Kansas City.

Price Current Reports:

WHEAT—Receipts 8,046 bus., shipments 15,885, in store 57,888. Higher. No. 2 red, cash, sales at 78 1/2 to 79c; May sales at 79 1/2 to 79 3/4c.

CORN—Receipts 7,116 bus., shipments 2,007, in store 18,325. Higher. No. 2, cash, sales at 37c.

OATS—Cash 32c bid, 32 1/2c asked.

RYE—Cash, 57 1/2c bid, 59c asked.

BUITER—Rolls are not wanted, as they arrive in soft condition. Factor goods are dull. Choice dairy and storepacked of the best quality are fair sale. Creamery goods are quiet.

We quote packed:

Creamery, fancy fresh made..... 24a25

Creamery, choice " "..... 21a22

Creamery, fair..... 19a20

Creamery, inferior to common..... 16a18

Choice dairy..... 19a20

Fair to good dairy..... 12a14

Storepacked table goods..... 14a16

We quote rolls:

Good to choice, wrapped..... 12a13

Good to choice, unwrapped..... 9 10

EGGS—Receipts of eggs fair and market steady at 10c.

CHEESE—We quote new eastern out of store—Full cream: Young America 14c per lb; do twins or flats 13 1/2c; do Cheddar 13 1/2c. Part skim: Young America 9a19c; flats 8 1/2 to 9c; cheddar 8 1/2 to 9c. Skim: Young America 6a7c; cheddar 5 1/2 to 6c. Old or sharp 1 to 4c lower as to quality. Kansas and Missouri part skim flats 7a 8c; skim flats 5c.

POTATOES—We quote home grown in a small way at 75a80c per bus. Consignments in car loads: Early Rose 62a65c, White Neshannock 50a55c, Peachblow and other choice varieties 55a60c. Col-ora o stock 70a73c. Early Ohio 80c.

SWEET POTATOES—Home grown 1 15a1 20 for red per bus; yellow 1 20a1 25 per bus. Seed potatoes 3 50a4 00 per bbl.

TURNIPS—We quote from wagons at 40a50c; consignments not wanted.

APPLES—Consignments of Missouri and Kansas choice to fancy, 2 50a3 00 per barrel; common to good 1 75a 2 00 per bbl. Home grown from wag-ons 75a90 per bus, for fair to good. Stand apples 1 00a1 25 per bus.

ASTOR BEANS—Quoted at 1 40a1 50 per bus.

FLAX SEED—We quote at 1 23a1 25 per bus upon the basis of pure.

In the Dairy.

About Chemical Methods for Examining and Ascertaining Adulterations of Butter.

An address delivered by Dr. H. Dettmer, analyst St. Louis Dairy company, before the Mississippi Valley Dairy and Creamery Association.

The great importance of agricultural products having for human welfare, induced the chemists immediately in the earliest period of the chemical science to make many careful experiments, examinations and analyses about these so very important products. Since that time, the interest of chemists, with respect to the examinations of agricultural products, has increased every year, and to-day the agricultural chemistry is not only a very important part of chemical science, but a great benefit for the whole mankind. In many modern States, agricultural experiment stations have been established, in which the most important questions of agriculture as manuring of soil, cultivation of grain and vegetables, breeding and feeding of cattle, sheep and hogs, and all products of dairies and creameries are examined by careful experiments. That with respect to these careful examinations and scientific experiments in last years, better products have been produced in all departments of agriculture, is an evident fact.

There are especially the products of dairies and creameries upon which these carefully chemical examinations have been of good effect, and which in consequence of it have got a greater value in the last years. By chemical experiments it has been learned what kind of foddering is necessary in order to produce either a good and wholesome milk for daily use, for babies and sick people, or a peculiar yield of milk, rich of fat, for manufacturing of good butter or cheese. However, when on the one side honest farmers, milk companies and other large dairy establishments have taken the advantage of the fruits of science in order to furnish good and pure milk, excellent butter, and all kinds of good cheese to the public, on the other side the great evil for the mankind, the adulteration of food has taken place also on this department, and unfortunately with a success. Indeed, we can say that to-day among all kinds of daily food the dairy and creamery products most of all are submitted to an abundant and even injurious adulteration, and that no greater evil exists for the human life than adulteration of these so very important products. I will only remind you of the fact that for example, milk is the only food for the young baby, and that especially in our large cities thousands of these little beings die in consequence of drinking bad and adulterated milk. But, besides this terrible and sorrowful fact, these dishonest sophisticators also injure the honest dealers in a sensible manner by selling their bad and cheap products for a lower price, and by this manipulation make a severe competition which the honest dealers very often cannot stand for a long time; and thus they are compelled either to deal with adulterated products, or to lose every profit, and to give up their business. Therefore, it must be the duty of every modern State to prevent such adulterations by severe prohibitory special laws, and by establishing chemical laboratories in which the suspicious products are examined. In the United States so little attention is given to the adulteration of food that very few States have enacted special laws to punish these practices. In other countries adulteration is strictly prohibited under penal obligations. In England the penalties are very severe, including both fine and imprisonment. In Germany the offender is liable to fine and imprisonment with confiscation of goods. In Holland and France the penalties are fines and terms of imprisonment, extending in some cases to five years.

As mentioned before, dairy products, which are of such great importance to the health and sustenance, are more extensively adulterated than any other food products.

How many thousands of gallons of milk are sold for pure country milk in our cities, while said milk is nothing else than skim-milk or watered milk having got, by nicely coloring, the appearance of full milk. Thousands of pounds of butter are sold in the open market during the winter time as best dairy or creamery butter, which butter after chemical examination is found to contain either no butter or mixtures in every percentage of butter with fat be-

longing to the animal or vegetable kingdom, but not taken from milk or cream.

The adulteration of butter to-day in the United States has obtained a degree of perfection and extent which is very surprising. In many different States there are large factories which make very great profits by manufacturing artificial butter and produce a product of beef and hog fat or other fatty substances, which by addition of a high yellow color and a chemical butyric-acid ether has the appearance of good creamery butter.

Before explaining the chemical methods for examining and ascertaining adulterations of butter, and being certainly of some interest to many of the audience, I will briefly give the history of the artificial butter, and the principal methods of its manufacture.

Prof. Megees-Mouries was the first person to make imitation butter, encouraged by the late Emperor of France, Napoleon III., in order to supply the want of pure butter, occasioned by the siege of Paris in 1870.

Prof. Megees-Mouries has had a satisfactory success with his experiments and in the year 1872 the first samples of his artificial butter or oleomargarine butter, as he called it, was sold in the open market. The method or operation of manufacturing oleomargarine, discovered by Megees-Mouries, afterwards was adopted with some modifications by the different manufacturers of artificial butter, which is briefly as follows:

The rough, unclean fleshy tallow of beef or other animal fats are ground first to small pieces, between two cylinders, provided with conic teeth, and afterwards cast in big wooden tubs which are kept by steam at a temperature of 113 deg. F. To the bulk in the tubs, about 2,000 pounds of fat are added, 600 pounds of water, 2 pounds of potash, and 2 stomachs of hog or mutton cut in small pieces. The latter and the potash effect a perfect separation of the fat from the nitrogenous fleshy substances. The fat is filtered through linen bags into iron vessels in which it is kept until it becomes stiff. After this, the stiff fat is able to be separated by hydraulic pressure and at a temperature of 77 deg. F. in stearine and oleomargarine.

The stearine, melting at a temperature of 104-122 deg. F., remains stiff; while the oleomargarine, melting at a temperature of 68-72 deg. F., becomes liquid. The stearine is used for manufacturing of candles. In order to get good artificial butter from the oleomargarine, the latter in a liquid condition is mixed with milk and churned. The proportion is, that to add 100 pounds of liquid oleomargarine are added 25 quarts of water, the latter containing still the soluble matter of about 4 ounces of lacteal glands. After churning, and in order to give this product the appearance and character of real butter, yellowish coloring matters and chemicals for pleasant smell, as butyric acid, ether and cumarin, are added to these products, which are now ready for the trade. The so-prepared artificial butter does not differ from pure butter in color and consistency, and only a little in taste; and nothing is to say against the selling of this product, supposed that this product is really sold under the name of artificial or oleomargarine butter, and not under the flag of pure butter. However, the resemblance in color, consistency and taste, gives an opportunity to dishonest dealers that this artificial product is sold simply as cow butter; the consequence is, that the public buying these counterfeits for good butter, is cheated; and the fraudulent dealer knowingly imposes upon the customer. Since the business of manufacturing imitation butter has been of great profit, there are established in recent time in our country, manufactories and factories, in which butter is made artificially of all possible fats. Further, the manufacturing of this artificial butter being sold in a short time, and in enormous amounts, may be made in a careless manner, and the consequence of it is that products are brought in the open market, which must be considered even injurious to health. This imitation butter is called in our country by the common name, bogus butter, or according to the foreign fatty compounds in it, oleomargarine, lardine and suine.

After these remarks I will try to explain the chemical methods by which the examining chemist is enabled to detect the adulterations of butter. The chemist must separate the adulterations of butter in three sections, and therefore the chemical examination has to go into (1) substances which shall increase the weight of butter, as buttermilk,

water, starch, cheese, flour, chalk, barytes and others; (2) coloring matters; these coloring matters are generally not injurious to health, because we presently possess a great number of good and not injurious colors. Recently, the favorite color generally used for coloring butter was annato, a natural coloring matter from the tree, bixa orellana, in East India and South America. Nevertheless, the chemical analysis has detected also, colors very injurious to health; for instance, at Paris, in France, where butter has been found colored both with the poisonous chrome yellow, a chemical compound of chromium and lead; and in other cases, victoria yellow, an aniline coloring matter. (3) Adulterations with foreign fat, that is to say, fat which is not obtained from milk or cream. These adulterations are the most frequent, and give the best profit.

The foreign fat is principally every kind of animal fat, as beef, mutton, and swine fat, but also vegetable oils fats as sesame oil, cotton seed oil, and others.

The examination of these substances which increase the weight of butter, and even the coloring matters, do not make great difficulty to the chemists. I do not mention these methods belonging to the general chemical analysis or microscopic examinations, and having further, no great interest. However, a greater interest has the detecting and ascertaining of foreign fat, which is more difficult for the chemist, and of which the analysis requires the greatest attention, skill and conscientiousness. When first the artificial butter came in the trade and therewith also, the adulteration of pure butter with foreign fat was commenced, all methods, applied by chemists, were of qualitative nature and not very exact or absolutely sure. Only since some years quantitative methods of examination are found out, by which means the chemists are enabled to detect and ascertain foreign fat in butter with certainty. But about the kind of fatty substances—whether it is tallow, lard or vegetable oil—we can tell nothing, and all tests and methods applied for ascertaining and determining them, have given and shown incorrect and even false results.

The methods of examining for foreign fats are divided in qualitative and quantitative methods. Qualitative examination means the simple proof whether a butter sample is adulterated or not without giving the amount or quantity of adulteration, while the quantitative examination directly gives the quantity of foreign fats contained in the examined butter. If the examination is required by the State, and prosecution shall be executed against the offender, only the quantitative examination has value, because the court requires figures, that is to say, the examining chemist must be enabled upon his analysis to say so many per cent. of foreign fat is contained in said butter.

Of many qualitative examinations, mostly without much value. I will only mention the examination by the microscope, the determination of the melting and stiffness point, and the determination of the specific gravity.

It is very singular that the microscopic examination has improved so very little in this department. The cause may be that the physical properties of fats are little or not at all different from each other. The best known method discovered and applied by Mylius and Skalweit, in Germany, rests upon the experience that butter in not melted condition appears below the microscope in polarized light dark, while all other fats previously melted appear as bright and splendid paints. This method done by a man familiar with the microscope, would have great value as soon as the question is to find out quickly the suspicious samples among a great number; however, as soon as pure butter, but previously melted, is in the trade, this method would give sometimes a false result. That such melted but quite pure butter comes in the trade is a fact, and was told me some days ago by a gentleman who belongs to such a butter factory. He told me the manufacturing, as follows: All butter furnished by farms to this factory, is first melted to an oily condition, and in this condition runs through a DeLaval Centrifugal Separator, and is gathered in tubs in which it remains months, until they will use it.

As soon as this stiff butter-fat shall be manufactured, it is melted again, and afterwards churned with milk. They give about 100 pounds of milk to 100 pounds of melted butter fat. After this operation the butter is ready for trade. By the microscopic method of Skalweit, such butter would be found

adulterated, while it is in fact pure butter; of course, the exact chemical analysis following after the microscopic examination will show the mistake. On the other side, mixtures of butter and vegetable oil will be hardly detected by the microscope, or not at all. We may get good and exact microscopic methods with the time; however, the recent methods have still to little value, and a judgment about butter given upon microscopic examination must be taken with great precaution.

(Concluded next week.)

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested his wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellow-men. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Power's Block, Rochester, N. Y.

A writer says that he has found that it requires as much food to bring one turkey to maturity, when the bird is confined to one yard, as to make forty pounds of pork. We should think that would depend on the size of the turkey, somewhat.

YOUNG MEN!—READ THIS.

THE VOLTAIC BELT Co., of Marshall, Michigan, offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred as thirty days trial is allowed. Write them at once for illustrated pamphlet free.

RIVER VIEW Stock Farm. 50 HEAD OF IMPORTED NORMAN STALLIONS

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

JAMES A. PERRY

Importer and Breeder of Norman Horses,
River View Stock Farm, Wilmington, N. H.
Fifty miles south of Chicago, on the Chicago & Alton railroad.

KANSAS FARMERS' MUTUAL FIRE INSURANCE CO.,

—OF— ABILENE, : KANSAS.

OFFICERS:
J. E. BONEBRAKE, President.
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—INSURES— FARM PROPERTY

—AND—
LIVE STOCK
Against Fire, Lightning, Tornadoes and
Wind Storms.

AGENTS WANTED in Every County in
Kansas.

For any information, address the Secretary,
Abilene, Kansas.

MONEY TO LOAN!

—ON—
WESTERN and SOUTHERN REAL ESTATE

At Lowest Possible Rates. Address, enclosing stamp,
WM. K. RITCHIE & CO.,
258 Washington St., Boston, Mass.

IT WILL BE AN ADVANTAGE to always mention
the KANSAS FARMER when writing to advertisers.

The Veterinarian.

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

LICE ON COLTS.—Will you please tell me what will kill lice on colts—something that will kill the whole crop, so there will be no hereafter? [Attention to cleanliness, by daily grooming, will be necessary to success. A few times, after grooming, moisten the coat by a sponge with a weak tobacco decoction.]

ANTHRAX.—The so-called black tongue in cattle is a form of anthrax fever. Separate diseased from healthy animals. Scarify vesicles as they appear, and cauterize with stick dipped in muriatic acid. Also, scarify the tongue, lengthwise, if much swollen. Those who attend to such diseased animals should be careful not to have sore or cracked fingers or hands. The disease, like all other forms of anthrax, is generally of a fatal nature.

MANGE.—I have a horse which has had the mange a year. He came from Texas. Can he be cured, and how? [Give loosening food, and a purgative compound of 5 drachms of aloes, 1 drachm of calomel, and 2 drachms of nitre, made into a ball. After cleansing the skin by thorough brushing, apply with a sponge, once daily, a solution made in the proportion of 1 ounce of bicarbonate of potash to each pint and a half of warm water. Also, attend to cleanliness of the surroundings of the horse, the harness, etc.]

RINDERPEST.—A report comes that a disease similar to the rinderpest is raging among the cattle of a farm near Lower Hill, Ill. Several animals have died and others are sick. No other cases have been reported. A reliable veterinary doc or has charge of the animals, and it is thought the disease will be checked. What is it? [Rinderpest, or contagious typhus of cattle, known in Europe as the "cattle plague," is a disease entirely foreign to this continent. Our great security from ever getting this, the most formidable of all plagues, into this country, lies in the extreme shortness of both the period of inoculation and the acuteness of the disease. Thus, an animal exposed to the contagion in Europe, and immediately brought on ship-board, would have the disease developed to a fatal termination by the time it was half way across the ocean. The period of incubation does not, as a rule, exceed five or six days, and within a week the animal is dead. In its most malignant form, its course is ended within forty-eight hours. Now, as the disease, so far back as history goes, never developed anywhere but in the Russian steppes, or is only supposed to originate spontaneously in the Asiatic steppes, whence it spreads only by way of contagion, how far is the story about its sudden development in the State of Illinois likely to be correct? If once here it would be all over the State like a wild-fire, and within fourteen days, in fact it would spread almost as rapidly as the so-called epizootic among horses swept over this country some ten years ago, and could never be confined to one farm. The so-called reliable veterinary doctor, who is said to have the animals in charge, may safely be set down as an ignoramus, or a knave wanting to make capital by creating a scare, by representing what most likely is nothing but a form of anthrax. He can never have seen a case of true rinderpest, and if he never was in Europe he certainly never has seen this formidable disease.]

With Ely's Cream Balm a child can be treated without pain or dread, and with perfect safety. Try the remedy. It cures Catarrh, Hay Fever and Colds in the Head. It is easily applied with the finger and gives relief from the first application. Price 50 cts., at druggists. 60 cts. by mail. Ely Bros., Owego, N. Y.

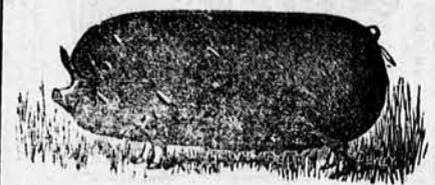
The bottle of Ely's Cream Balm that I obtained of you last summer has entirely cured my little boy of a severe attack of catarrh.—Mrs. Sallie Davis, Green Postoffice, Ala.

One of my children, a girl about 9 years old, had a very bad discharge from her head and nose of a thick yellowish matter, and was growing worse. We had two different physicians prescribe for her, but without benefit. We tried Ely's Cream Balm, and much to our surprise in three days there was a marked improvement. We continued using the Balm and in a short time the discharge was apparently cured.—O. A. Cary, Corning, N. Y.

Prof. Stockbridge says that the average growth of wood on any acre of land, between New England and the Potomac, is a cord and a half a year for thirty years after it is once cut over.

Consumption, Coughs and Colds cured by Dr King's New Discovery. Trial bottles free.

PLEASANT VALLEY HERD Pure-bred Berkshire Swine.



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

JAMES ELLIOTT Abilene, Kansas.



Breeder of HIGH CLASS BERKSHIRE SWINE. My herd is composed of twenty breeding sows of the leading families known to me, headed by Earl of Carlisle 10459. My hogs are noted for size, uniformity, fine heads, broad hams great depth, with short, strong legs. They are perfectly marked, having good coats of hair; with quality of bone that enables them to carry great weight, combining quick and easy feeding qualities. Stock all recorded in A. B. R. I am now prepared to fill orders for pigs, of either sex. Prices reasonable. Correspondence and inspection invited.

PURE-BRED Berkshire and Small Yorkshire SWINE.



We are breeding 25 of the best selected sows of the above named swine to be found in the country, direct descendants from Imported Sires and Dams. We are prepared to fill orders for either breed, of both sexes, at the very lowest prices. We have tried 80 all Yorkshires thoroughly, and are satisfied that they cannot be excelled as a profitable hog to raise. They are very docile and mature rapidly. Send for prices and catalogue to WM. BOOTH & SON, Winchester, Jefferson Co., Kas.

Acme Herd of Poland-Chinas



We are having a splendid lot of pigs for this season's trade sired by "Challenge 49 9" and "King 2661" and is taken now. Pedigrees gilt-edge and stock first-class. We claim that our "Challenge 49 9" is the best boar in Kansas for money, marbles or chalk. STEWART & BOYLE, WICHITA, KANSAS.

Advertisement for Poland-China Swine, listing options for young sows, young boars, young sows, and spring pigs, with contact information for Miller Bros. in Junction City, Kas.



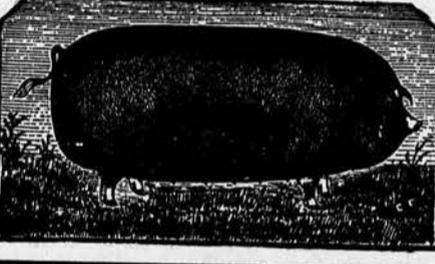
ISAAC WOOD, Oxford, Kas.—PIONEER.—The swinestakes herd of the Southwest for three consecutive years. Comprising the blood of all the popular strains of the day. Six years a specialty. Pigs furnished not of kin. Quality of stock and pedigree first class. Prices low and favorable rates by express to all points. Pigs of different ages ready to ship, and orders taken for future delivery. Satisfaction guaranteed. For history of herd, see Vol. IV, page 81; Vol. V, page 47, and Vol. VI, page 87, Ohio P.-C. Record. Correspondence invited.

Manhattan Herd of Berkshires



SOVEREIGN DUKE 3819.—(From Life, by Lou Burk.) SOVEREIGN DUKE 3819, at head of famous Manhattan Herd. Among many other honors, elsewhere, this splendid sire won five blue ribbons during two successive years at the great St. Louis fair including sweepstakes as best boar of any age or breed, each year,—a record never attained by any other boar. At the St. Louis and other leading fairs of 1882, the Manhattan Herd sustained its well-earned prize-winning reputation of former years by winning a majority, over all competitors, of the premiums competed for, being 13 sweepstakes and 58 prizes for that year. Until the present time I have been unable to supply the demand from some fourteen States and Territories for my swine, but I now have about 40 very choice young Boars and sows old enough to use, that I will sell at a price to suit the times. A case of Cholera has never occurred in my Herd, which has come through the past severe winter in very thrifty condition. Twelve different families of Sows and five noted Boars in use. Satisfaction guaranteed. Send for Catalogue to

A. W. ROLLINS, Manhattan, Kansas.



TIMBER LINE HERD —OF— HOLSTEIN CATTLE and POLAND-CHINA PIGS.

We have on hand 150 head of fine pigs for sale now and for spring trade. Also a fine yearling Holstein bull and a few grade Holstein cows for sale. Splendid milkers. We guarantee satisfaction. All correspondence answered. Inspection invited. W. J. ESTES & SONS, Andover, Butler Co., Kas.

Poland-China and Berkshire HOGS.



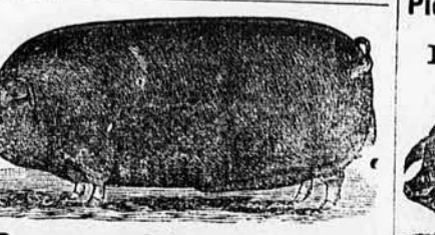
We have for sale a fine lot of Poland China and Berkshire Pigs, from 2 to 6 months old. Ours is the Largest herd of pure-bred Swine in the State, and the very best strains of blood of each breed. If you want any of our stock write us and describe what you want. We have been in the business many years,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



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



Dr. Thomas Blackwood, Breeder of POLAND-CHINA SWINE. My Poland-China herd numbers over 75 head. My stock is first-class, all registered, and guaranteed just as represented. Choice breeding stock not skin, of both sexes, for sale at all times at reasonable prices. All correspondence promptly answered. For full particulars and prices, address, THOMAS BLACKWOOD, Clay Center, Kansas.



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

THOROUGHbred POLAND-CHINA



As produced and bred by A. C. MOORE & SONS, Canton, Ill. The best hog in the world. We have made a specialty of this breed for 38 years. We are the largest breeders of this breed in 1883 and could not supply the demand. We are raising 1,000 pigs for this season's trade. We have 160 sows and 10 males we are breeding from. Our breeders are all recorded in American P.-C. Record. Pigs all eligible to record. Photo card of 43 breeders free. Swine Journal 25 cts. in 2 cent stamps. Come and see our stock; if not as represented we will pay your expenses. Special rates by express.

MEADOW BROOK HERD



OF POLAND-CHINA SWINE. Breeding Stock recorded in American and Ohio Records. Tom Duffield 1675 A. P.-C. R., at head of herd. Always space with latest improvements or the favorite breed. Personal inspection solicited. Correspondence promptly answered. JELLEY & FILLEY, Proprietors, KINGMAN, KANSAS.



REGISTERED POLAND-CHINAS. 62 Page Illustrated Manual. Sent free on application to Shepard & Alexander, Charleston, Illinois.

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



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

The Busy Bee.

Raise First-Class Honey.

Mr. W. Z. Hutchinson, in a late number of the *Farmer's Review*, says:

Probably there never were more bees in this country than at present. The indications are that the present winter will be a favorable one for them, and should the low price of sugar continue the prospects are that honey will be sold exceedingly low another season. Some of the "knowing ones" are predicting that nice, white comb honey in pound sections will be sold for ten cents per pound. One thing is certain, unless there are heavy winter losses, followed by a poor honey season, honey will take a drop. This state of affairs can be met in two ways, by reducing the cost of production, using low-priced section-boxes, etc., or by producing a superior article that will sell above market price. Strange as it may appear, the great mass of producers will adopt the first plan, which makes it all the better for the few who will take the trouble to raise a first-class article and put it upon the market in the most attractive shape.

Each year, while in Chicago attending the annual convention of the Northwestern Bee-Keepers' Association, the writer has spent a few hours in visiting the commission merchants upon South Water street, and the lessons there learned were fully as useful as those learned at the convention. Two years ago, in one commission house he saw one lot of honey that had been there a whole year. The crates were large—about fifty pounds—made of inch lumber, with a hole in one side covered with a pane of glass. The holes for the glass were probably intended to be rectangular, but some of the angles were obtuse, some acute, and others right. The holes were cut out with a coarse saw, as the marks of the teeth plainly showed. The sections had not been cleaned of propolis, the honey was dark, and the combs had a yellow appearance. The shipper had complained bitterly because the commission merchant was "so slow." Good, white comb honey, neatly crated in small, light crates of basswood, with a slip of glass in each end, was then selling at eighteen cents, but there was one lot in which the combs were very white and smooth, that was bringing twenty cents. Differences like these could be seen the whole length of South Water street, the lower grades predominating. "Gilt-edge" honey does not long remain unsold. A year or two ago a bee-keeper, while on his way to Chicago, stopped off a few hours at a neighboring town. While there he informed a friend of the writer that he was going to Chicago to "see about" some honey that he had shipped there a year previous. His honey was dark, and was sent to market in the same receptacles in which it was stored, i. e. the sections were not cleaned of propolis and packed in new, clean, shipping-crates, but were shipped just as taken from the hives, without removing them from the case in which they were held in position upon the hives.

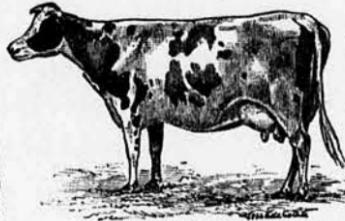
Last July, the writer sent a consignment of 1,000 pounds of comb honey to a Cleveland commission merchant. In three weeks there came a check in payment for the honey, and accompanying it was the following: "We must say, without prejudice, that we thought your honey a little nicer than any lot received to date. It was more uniformly white, selected very carefully, crated very nicely and pleased purchasers exceedingly. We wish all would exercise equal care in marketing their products. Very frequently we have to remonstrate with persons for the carelessness with which they manage their goods. After it has taken them a whole year of preparation and waiting to produce them, they will tumble them into some kind of a receptacle, throw them into their wagon and rush their horse to market or the nearest station, at its greatest speed. In this way what would be profit is lost by the lower price at which the goods have to be sold." Another and larger consignment of the writer's honey was sold the past season, in the Chicago market, in a very few weeks, at an advance of one cent per pound above the highest market price. At the last convention held by the Michigan State Bee-Keepers, one of the largest producers informed the writer that his honey had sold the past season, in New York city, for twenty-one cents per pound. He used the nicest white poplar sections he could buy and crated his honey in small crates of white bass-

wood. Two ladies in northern Michigan have, for several years, put upon the market honey that has sold at an advance of two or three cents per pound above the market price.

To raise first-class honey, it must be white. Dark honey should never be put upon the market in combs. It should be extracted, in which form it is much more salable. In the Northern States, basswood and white clover are the main sources from which white honey is gathered. If located where either these two magnificent honey plants abound, the bee-keeper should, if he wishes to raise first-class honey, use the whitest, smoothest poplar sections that he can procure. Poplar is no whiter than basswood, but it is harder, and the honey never discolors it by soaking into it. If straight, even combs cannot be secured without the use of separators, then let them be used. As soon as finished, the sections should be removed, otherwise the constant travel of the bees will stain or discolor the dainty whiteness of the combs. As a rule, the black bees build straighter, whiter combs than the Italians. Sections should never be taken from the hive until every cell is sealed; they should be carefully cleaned of every trace of propolis, and crated in small, neat crates, with glass in the sides or ends. Smoothly-planed basswood or poplar makes very neat crates.

First-class comb honey must be first-class in appearance as well as in quality; in fact, so far as its sale is concerned, the appearance is of more importance than the quality. Not so with extracted honey, in which quality is fully as important as appearance. Comb honey is a thing of beauty, is used as an ornament for the table as well as a delicacy, while extracted honey can be made no more ornamental than common molasses or syrup. The only requisite in raising first-class extracted, aside from the source from which it is gathered, is that the honey be thoroughly ripened. Some of our best apiarists assert that honey extracted as soon as gathered, before it is ripened and sealed over, and then ripened or evaporated by exposure to the air, or to the sun's rays, is equally as good as that ripened and sealed up by the bees. Others, among whom is the writer, think no honey is so rich, sweet and finely-flavored, as that ripened and sealed up in the hive. The only way in which an attractive appearance can be given to extracted honey, is to put it up in attractive packages. Small tin pails, neatly labeled, are excellent packages, and after the honey has crystallized it is in fine shape for transportation.

Largest and Choicest.



Every animal selected by a member of the firm in person.

HOLSTEIN CATTLE.

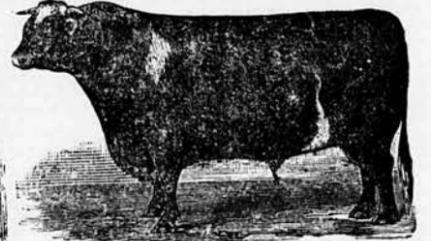
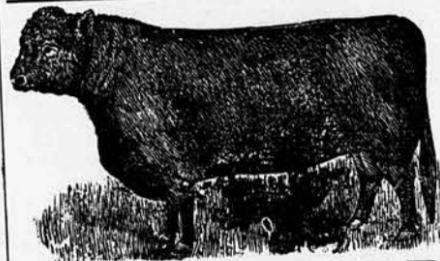
550 Head on Hand.

Over thirty yearly records made in this herd average 14,212 lbs. 5 ozs.; average age of cows four- and a-half years. In 1881 our entire herd of mature cows averaged 14,164 lbs. 15 ozs. In 1882 our entire herd of eight three year-olds averaged 12,388 lbs. 9 ozs. April 1, 1884, ten cows in this herd had made records from 14,000 to 18,000 lbs., each, averaging 15,608 lbs. 6 3/10 ozs. For the year ending June 1884, five mature cows averaged 15,621 lbs. 1 2/5 ozs. Seven heifers of the Nether and Family, five of them two years old and two three years old, averaged 11,516 lbs. 1 2/5 ozs.

BUTTER RECORDS.

Nine cows averaged 17 lbs. 5 1/2 ozs. per week. Eight heifers, three years old, averaged 13 lbs. 4 3/4 ozs. per week. Eleven heifers, two years old and younger, averaged 10 lbs. 3 ozs. per week. The entire original import of Netherland Family of six cows (two being but three years old) averaged 17 lbs. 6 1/8 ozs. per week. When writing always mention the KANSAS FARMER.

SMITHS, POWELL & LAMB, Lakeside Stock Farm, Syracuse, N. Y.



THE LEONARD BROTHERS

Importers and Breeders of

Galloway, Aberdeen-Angus and Short-Horn CATTLE,

SPANISH - JACKS - AND - JENNETS,

MOUNT LEONARD, MISSOURI.

A very choice lot of Black Polled and Short-horn Grades for sale. Carload Lots a specialty for Ranchmen. We have some of the largest and choicest herds of Pure-bred Stock to select from. Prices Reasonable. Call on or address

LEONARD BROTHERS, Mount Leonard, Missouri.

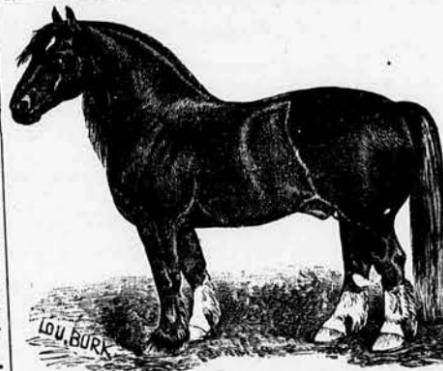
GALBRAITH BROS.,

Janesville, Wisconsin,

Breeders and Importers of

Clydesdale Horses

Have at present on hand a splendid collection of Stallions and Mares of all ages, and every animal guaranteed. Our buying facilities being unequalled, we can offer our stock cheaper than the same quality can be bought at elsewhere. Send for illustrated catalogue. Correspondence solicited. Visitors welcome. Janesville is 91 miles from Chicago by the C. & N. W. railroad, and 20 miles from Rock Island by the C. M. & St. Paul railroad.



FRANK CRANE,

Formerly of the firm of A. A. Crane & Son, Oco, Ill.

COMMISSION AGENT

—For the Sale of—

HEREFORD, POLLED ANGUS, GALLOWAYS, SHORT-HORN,

And Thoroughbred and Grade Cattle of all breeds.

Carload Lots a Specialty.

Stables, Riverview Park. Address F. P. CRANE, Stock Yards, Kansas City, Mo.

—175 HEAD OF— IMPORTED CLYDESDALES

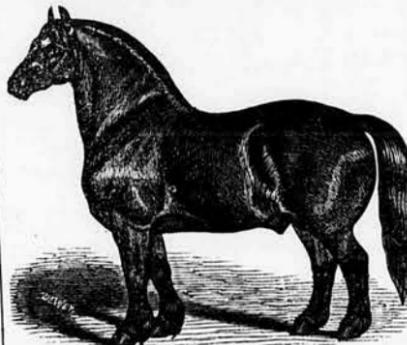
Now on Hand.



The largest importer of Clydesdale horses, the largest breeder of pure Clydesdales. 37 Mares now in breeding. Moderate prices. No equal opportunity can be found elsewhere to buy matured Stallions or young Stallions and Mares, all ages. Persons invited to examine the stock. Correspondence invited. For particulars, call on or address

ROBERT HOLLOWAY, Alexis, Ill.

PERCHERON NORMAN, CLYDESDALE and ENGLISH DRAFT HORSES.

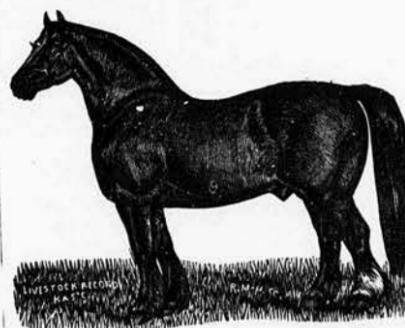


E. BENNETT & SON

Importers and Breeders,

Topeka, Kansas.

All stock registered. Catalogues free



JOHN CARSON,

Winchester, Kansas

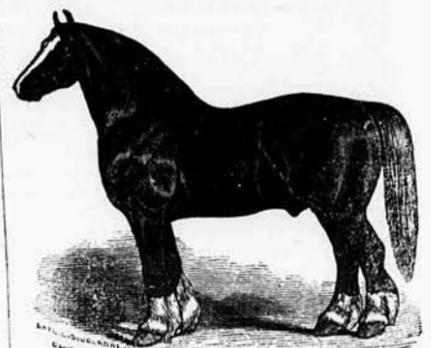
Importer and Breeder of

Clydesdale & Percheron-Norman Horses.

Oh look stock for sale. Also some fine Grades. Correspondence solicited and satisfaction guaranteed. I have some Jacks for sale.

OVER ONE HUNDRED CLYDESDALE, ENGLISH DRAFT AND PERCHERON NORMAN

Stallions and Mares arrived in August, '84.



Another importation just received, ages range from two to four years old. Our stock won fifteen premiums at the Iowa State Fair of 1884; also sweepstakes on Clyde-dale stallions and sweetstakes on Percheron-Norman stallions. 300 High-Grade Mares, in foal to our most noted horses, for sale. Advantage offered to customers at our ranch: Many years' experience in importing and breeding. Immense collections, variety of breeds, enabling comparison of merits. The best of everything. A world-wide reputation for fair and honorable dealings. Close proximity to all the through railroad lines. Low prices consequent to the extent of the business. Low rates of transportation and general facilities. Visitors welcome at our establishment. Ranch 2 miles west of Keota, Keokuk Co., Iowa, on the C. R. I. & P. R. R.; 15 miles west of Washington, Ia. SINGMASTER & SONS, Keota, Keokuk Co., Iowa.

WILSON'S CREAMERY

is endorsed by FARMERS to be superior to all others as a LABOR-SAVING Creamery. GOOD AGENTS are wanted in every town on liberal terms to handle our creamer and the WILSON CHURN. Send for Circulars, etc.

FLINT CABINET CREAMERY CO. FLINT.

THE STRAY LIST.

HOW TO POST A STRAY.

BY AN ACT of the Legislature, approved Feb 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisement, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice. And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper free of cost, to every county clerk in the state to be kept on file in his office for the inspection of all persons interested in strays. A penalty of from \$5 00 to \$50 00 is affixed to any failure of a Justice of the Peace, a County Clerk, or the proprietors of the FARMER for a violation of this law.

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

Broken animals can be taken up at any time in the year. Unbroken animals can only be taken up between the 1st day of November and the 1st day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray.

If an animal liable to be taken, shall come upon the premises of any person, and he fails for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

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

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

The Justice of the Peace shall within twenty days from the time such stray was taken up, (ten days after posting) make out and return to the County Clerk, a certified copy of the description and value of such stray. If such stray shall be valued at more than ten dollars, it shall be advertised in the KANSAS FARMER in three successive numbers.

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

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

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

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

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

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

Strays for week ending April 1, '85.

McPherson county--E. L. Loomis, clerk.

2 GELDINGS--Taken up by J. W. Moore, in Castle tp., March 5, 1885, two geldings, each about 16 hands high and weighing about 1,000 pounds each, one is a light bay and the other a dark bay, no visible marks except harness marks, both had on leather halters--one with short rope, the other with short chain attached; valued at \$125 each.

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

OOV--Taken up by B. O. Williams, in Lincoln tp., one pale red cow, point of right horn broken off, white spot on belly, thin in flesh; valued at \$25.

Russell county--H. C. Hibbard, clerk.

STEER--Taken up by J. J. Johnson, in Fairview tp., February 13, 1885, one deep roan yearling steer, no marks or brands.

Strays for week ending April 8, '85

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

MARE--Taken up by Lemuel Downing, in Lincoln tp., February 25, 1885, one black mare, 10 years old, left hip knocked down, blind in right eye; valued at \$25.

Harvey County--John C. Johnston, clerk.

HORSE--Taken up by J. L. Renolds, in Darling on tp., March 7, 1885, one medium-sized black gelding, star in forehead; valued at \$60.

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

PONY--Taken up by Jasper Lightner, in Harlem tp., March 21, 1885, one pony mare, 4 years old, 13 hands high, (color not given), white hind feet.

MULE COLT--By same, March 10, 1885, one dark brown horse mule colt, about 1 year old.

Pottawatomie county--I. W. Zimmerman, clk.

COLT--Taken up by Henry Shehl, in Spring Creek tp., February 7, 1885, one bay mare colt; valued at \$60.

COLT--By same, same time and place, one iron-gray colt; valued at \$40.

Strays for week ending April 15, '85.

Chase county--J. J. Massey, clerk.

STEER--Taken up by J. C. Thompson, in Bazsar tp., March 5, 1885, one speckled 2-year-old steer, points of both horns off, under-bit out of left ear, no brands visible; valued at \$25.

Jewell county--W. M. Stephens, clerk.

STEER--Taken up by N. Reed, in Walnut tp., March 24, 1885, one red steer, 1 year old this spring or summer, red and white, red spot in forehead, white belly, square crop and slit in left ear; valued at \$13.

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

HORSE--Taken up by C. C. Seward, in Longton tp., March 9, 1885, one brown horse, 13 hands high, about 12 years old, white spot in forehead, left hind foot white, branded something like ∞ on right hip, collar and saddle marks.

MARE--By same, one sorrel mare, 18 hands high, 10 or 12 years old, white stripe in face, left hind foot and right fore foot white, collar and saddle marks.

MULE--By same, one black yearling mule, no marks or brands.

Three above-described animals valued at \$100.

Wabaunsee county--H. G. Licht, Clerk.

STEER--Taken up by L. Ronsee, in Kaw tp., (P. O. St. Marys), March 25, 1885, one red line-back steer, 1 year old past, branded A on right hip; valued at \$15.

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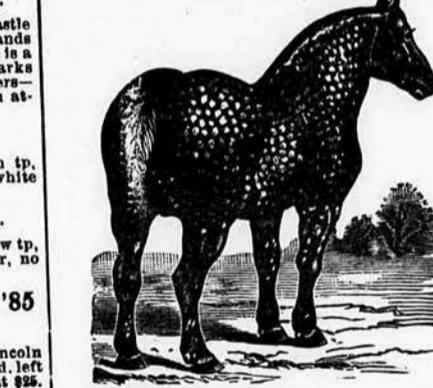
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—AT—
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—ON—
Friday, May 8th, 1885.



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Oakland Stock Farm
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The Property of
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SABETHA, KANSAS,
At Sabetha, Kas., Thursday, April 23d, 1885,
(The day following J. S. Lemon's sale at St. Joe, Mo.)

I will sell about 55 head of choice Breeding Short-horn Cattle. In this offering are 33 Females and 22 Bulls, including the three first-prize and sweepstakes Bulls at the World's Exposition, New Orleans, and some of the choicest young Bulls ever offered in a Western sale. The disposition will consist of Young Marys, Lady Elizabeths (or Nelly Blys), Mazurkas, Waterloos, Pomonas, Amelias, Succes, Floras, Autumn Queens, and other desirable families, with the best of top crosses. The Females that are old enough have calves by their side, or are most of them in calf by one of the above noted prize winning Bulls, IMP. MAZURKA DUKE 62768 by 4th Duke of Clarence (the best Bates Duchess Bull living), or by one of the Nelly Bly Bulls. Sale immediately after 12 o'clock lunch. Send for Catalogue. COL. L. P. MUIR, Auctioneer.

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ASSOCIATION
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On TUESDAY, MAY 5th, 1885,
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—AT—
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KANSAS CITY, MO.,
—ON—
Friday, May 8th, 1885.

44 Herefords, 16 Galloways and 4 Polled Angus Bulls. Many of these Bulls are of the very best strains of blood to be found in England and Scotland, the Herefords by such breeders as Thomas Fenn, Stonebrooke House; A. R. Boughten Knight, Downton Castle; Wm. Tudge, Lienthall; J. Pearce, Snowhill Court; P. G. Hughes, Stoke Castle, Craven Arms, etc. The Galloways are all from the famous herd of Thomas Wilken, Tinwald Downs, Dumfries, Scotland, and the Aberdeen-Angus by A. R. Boughten Knight.
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The Poultry Yard.

Poultry Yard.

Next to keeping sheep, the keeping of poultry seems to have a fascination for the popular mind. No doubt the origin of the idea as regards sheep, and the ease, pleasure and profit of keeping them, comes from those never-to-be-forgotten poetic rhapsodies of Virgil, and the old songs and madrigals of later times; and the equally rhapsodical poetry of modern writers, who so delusively harp upon the beauties and profits of a shepherd's life, serves to keep the illusion alive. It is very much the same as regards poultry. Nevertheless, one may keep sheep and fowls as well, if he will only get over the notion that they will keep themselves. I well remember a young man, 20 years ago, being smitten with this chicken fever. He raked the country over until he procured 300 hens and a score of cocks, built a high picket fence about a quarter of an acre of ground, put up a board shanty for a roosting house, laid in a stock of corn and oats, provided baskets and barrels to take in the eggs, and began business. It is quite unnecessary to say a word as to the result. It was "the old, old story." But it might not have been had the management been judicious and reasonable. And this is the point where poultry-keepers are particularly interested.

I ask, then, what is judicious and proper management? The remarks of S. P., on page 965, are exceedingly sensible, and pertinent to this question. But I hope to be excused when I say they are not particular enough. Particularly in description in regard to this matter is an absolute necessity, because judgment depends wholly upon what one knows either by experience or through the stated experience of others, and when S. P. says "I prefer to fence in the fowls, giving them good roomy quarters, with grass and shade and water," he stops at the very point where your interested readers would have him go on at a lively pace, and tell them how grass, especially, can be furnished in a fenced yard. Now, after more than 30 years' experience, gradually built up, with many failures, from which useful lessons were learned, I have found that this is the very pivotal point upon which the balance of success or failure is suspended. For 100 fowls will so foul a whole acre of grass land in three months as to make it utterly unfit for them. I have found a yard of this size to be so covered with manure in a month that one's foot cannot be put to the ground without treading upon the droppings, while the grass is completely unfit for food. Then disease invades the flock, and all is lost.

One may say then that an acre is not enough for 100 fowls. It is not if the fowls are confined to it, and no provision is made for keeping it in a wholesome condition. But if this yard is divided into two parts, and each half plowed and sown to green crops, all the trouble is avoided and success is assured; and yet some more particularity is needed, and how to do this should be explained. Grass may mean any suitable green crop which fowls will eat. The plan I have followed is as follows: To plow one yard early in the fall and sow it with rye. The rye is ready for use in October, and will last until winter sets in. The fowls are turned on to it at that time, and the other half is plowed and sown in the same way. This is ready for spring use, and will last until July. The fowls being put to this in the spring, the other land is sown to oats and peas, or rape or turnips, or anything that will produce green food. Then the other ground is sown with rape, or corn broadcast, or mixed seed. Prickly confrey is eaten by fowls very eagerly, and a row of this around the whole lot will furnish a perennial supply of acceptable food. But the plowing is indispensable, as it cleanses the soil and gets rid of every provocative of disease. By this method the fowls will enjoy every possible and necessary comfort and sanitary requisite, and the expense of feeding them will be reduced one-half; and, moreover, they will have all the necessary range. The yard should be bordered on each side with a row of Austrian pines, or Norway spruces, for shelter, and for acceptable places for summer nest boxes in which the hens would delight to lay their eggs and brood. This method is an extension of the plan described by S. P., which would be impracticable without the division of the yard and the alternation of the divisions. If one would pursue this plan and have an acre, with its house, for each flock of 100 hens, he could keep as many flocks as he has ground to accommodate.—Henry Stewart, in Country Gentleman.

Feeding Fowls Properly.

Most people take for granted that they, at least, "know how to feed chickens," and almost everybody has a different way of doing it. My father used to say "a boy who eats well will work well," and fowls must be taught to eat well—not be overfed, however, or crammed, but provided with a variety of food to such an extent as to create an appetite for something continually. A laying hen is a perfect mill, and while her usefulness lasts, should always be kept grinding. I do not mean by that to keep a box of food before her continually, for what boy would care very much for pumpkin pie if a huge pie was kept at his side continually? The point to be gained is to keep the fowl eating and keep her hungry, too; hence the necessity of variety. Let corn, oats, cracked corn, wheat screenings, meal pudding, rye,

soaked crackers, buckwheat, etc. follow each other in succession, and for side dishes and desert, supply chopped bones (if directly from the butcher, with some meat on them, so much the better,) and, if confined, plenty of green food; if near the water, pounded shell-fish (shells and all) and crabs chopped fine. By so doing your fowls are not required to eat the same thing more than twice each week, and the result is, they always have good appetites, thrive well and the grand result is at once achieved—plenty of eggs and healthy fowls!



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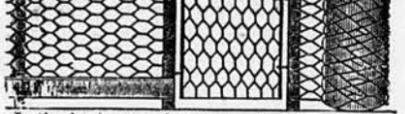
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A Retrospect in Horticulture.

At a recent meeting of the Douglas County Horticultural Society, the following paper was read by B. F. Smith, the Secretary:

Thirty years ago yesterday I landed in Kansas City en route for Lawrence. Kansas City was then nothing but a small village or trading post, being the outfitting point for New Mexico and California. In the afternoon of March 20th, 1855, I left Kansas City, traveling as far that day as the Quaker Mission, a school for Indian children, under the auspices of the Quaker denomination. The person in charge sympathized with the Free State movement, and furnished meals and lodging for all the Free State emigrants that called there for entertainment, charging the moderate price of 25 cents a meal. Early on the 21st, thirty years ago to-day, a snow fell deep enough to cover the ground, but the sun coming out very warm it was all melted by noon, and in the afternoon the roads were dusty.

Following the California trail, I arrived on the east bank of the Little Wakarusa about sundown, where I camped for the night. The next day I arrived in the embryo city of Lawrence about noon. I often draw the contrast, instinctively, between Lawrence then and Lawrence now.

Then there was not a tree of any kind to be seen between Kansas river and the Wakarusa. The California trail ran up the point of Mount Oread where Judge Thacher's vineyard is now located. From the top of that point the view presented was one of interminable prairie grass. Now a view from the same spot presents a beautiful city of 12,000 inhabitants, embowered in trees, shrubs, and flowers, like pictures of silver in apples of gold, as beautiful as a bride adorned for her nuptials.

Outside of this embowered city, as far as the eye can reach, are beautiful groves, numerous orchards, bearing annually thousands of bushels of apples, and vineyards, furnishing tons of the luscious grapes; besides friend Smith's broad acres of strawberries and raspberries. It is said that the man who makes two blades of grass grow where only one grew before, is a public benefactor. If this be so, what shall be said of the people of this vicinity, who have transformed a wilderness of grass into a garden of Eden—a paradise.

The first settlers were constantly reminded by their Missouri neighbors that fruit could never be grown in this wild and windy country. That the wind would blow our apple trees to pieces, and if any of them escaped, the fruit would be blown off the trees before it could mature. This information was very discouraging to us who came here to make homes and to stay. This, together with the unsettled political condition of the Territory, prevented any extensive planting of orchards for several years. Friend Jos. Savage, however, had more faith in the fruit prospects for Kansas than most of us, and with true Yankee grit went right to work planting fruit in the spring of 1855. I hauled the first lot of trees he planted from Kansas City in April of that year.

The lot contained 25 apple trees and a dozen cherry trees. These trees he planted in the sod, and I believe they all grew. Two of the apple trees are still living and bearing fruit. I commenced planting fruit trees in 1858, the result of which has been a good measure of success. But we all labored under the disadvantage of not knowing what to plant. This knowledge has been acquired by experience, which is often an expensive teacher. Through the experiences of our first settlers, and the teachings of our horticultural societies, we can now plant fruit trees with as much assurance of success as the farmer who plants corn or potatoes. For many years, our Missouri neighbors supplied us with apples. Almost daily through the summer and fall, covered wagons loaded with apples, might be seen on the streets of Lawrence, the sign being an apple stuck on the end of a long stick, which projected from the front of the wagon. We were thus permitted to buy their wind-fallen apples after being hauled a hundred miles—more or less—for one dollar a bushel. Now mark the contrast: Instead of buying apples by the bushel from Missouri wagons, we are shipping them by the car-load east and west, north and south. A walk through Massachusetts street during fruit-shipping season tells the story. It proves that the Kansas winds, though pretty active at times, do not blow the trees to pieces, nor the apples off the trees.

Committee on arrangements and places for holding the summer meetings were not ready to report, but promised to be ready to announce the place at the April meeting. It is understood, however, that the May meeting will be held at E. A. Coleman's and the June meeting at the residence of President Elyatt. As the impression may go out from the wording of our last report that luncheons were to be free, we would again remind all members and others attending the meetings that they must bring a goodly supply of the staff of life.

On motion, the Secretary was instructed to have the minutes of this meeting published in all the Lawrence papers, and that a hundred and fifty copies be ordered and sent to the leading weekly and daily papers of the State.

On motion, the society adjourned until the third Saturday in April.

Vitality of Great Men

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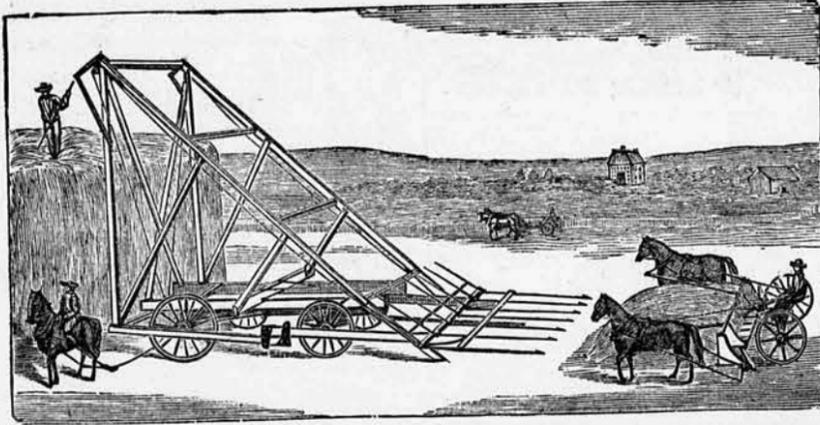
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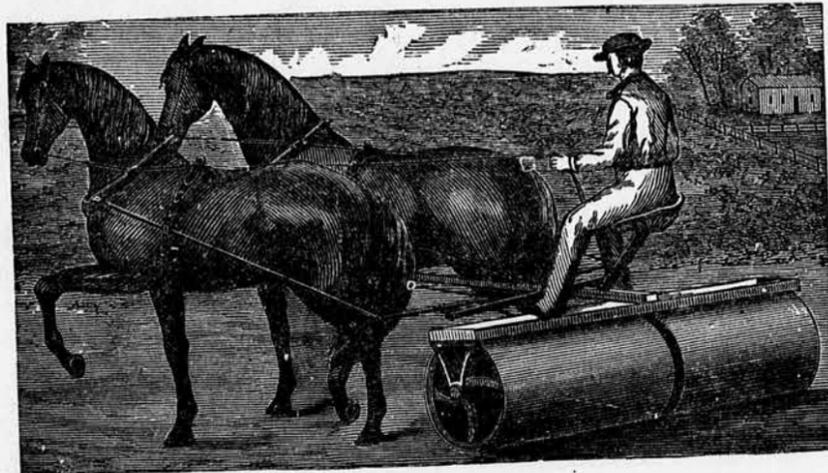
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