

# THE KANSAS FARMER

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## THE KANSAS FARMER.

E. E. EWING, Editor and Proprietor,  
Topeka, Kansas.

### Communications.

#### Sulphuring Grapevines.

It was my intention to have used sulphur quite freely the past summer as a preventive of grape mildew, but owing to absence and lack of time it was neglected until too late to do much good. The same was true, I presume, of many other grape growers, for I hear of but few who tried sulphuring, although faith in its utility is quite general. I think it would be useful for the public if those who have found advantage from this or any similar experiments, would report the results through the papers. Let us hear, for instance, from G. M. High, of Middle Bass, as to his observations this season.

Mr. H. H. Sturges, who is the owner of a large Catawba vineyard on Kelley's Island, in a location where mildew is rather apt to prevail, writes me as follows, dated Oct. 23d:

"In visiting different vineyards on the island, at this time, we hear almost everywhere such expressions as 'I am going to sulphur my vines next year—it keeps the leaves on and ripens the fruit. You see well ripened grapes bring four to five cents per pound, while those red ones have to sell for two or three cents.' We have sulphured more than any others on this island, and have a larger crop of ripe grapes, while vineyards on each side of us average one-half red, with many green berries. We tried some experiments with bone dust and charcoal as fertilizers for vines, but cannot as yet see any advantage therefrom. I hope others who have tried such experiments will report the results."

In my own vineyard, on sandy soil, bone fertilizing has perceptibly increased the growth of vines, but has not lessened the tendency to mildew and rot.—M. B. B. in Ohio Farmer.  
Lake Co., O.

#### Heavy Fleeces.

I have just finished shearing my rans, 126 in number, and send result: Total weight of wool, 3,566 pounds; average weight of fleece, 28 2/9 pounds; heaviest weight fleece, 49 pounds; lightest weight fleece, 17 pounds; weight of 15 fleeces, 620 1/2 pounds; average weight of 15 fleeces, 41 1/2 pounds.

We hereby certify that the above is the true weight of wool sheared and weighed by us from 126 head of rans owned by G. H. Wadsworth, of Larned, Pawnee county, Kansas.

DAVID S. BAKER,  
FRANK A. HOLT,  
WM. M. REEDER,  
JOHN LAWTON,  
L. C. REED,  
D. B. WELCH.

Twelve of these sheep were bred by Hammond, the great sheep man of V. T., and the rest of them in Michigan and Ohio. They have been fed with fifteen other sheep, 1 1/2 bushels corn each day the past winter, and what millet hay they wanted. Can the state beat it?

G. H. WADSWORTH,  
Larned, Pawnee Co., Kansas.

#### Making Good Butter.

A No. 1 article of butter first requires a good stock of cows, and next good care and feed, also experience in making. In winter cows ought to be fed, besides good early cut hay morning and night, some yellow meal, bean and oil meal, and also some roots, carrots, mangol, wurzel or yellow rutabagas. If so fed, cows will give rich milk and the butter will be nearly as yellow as in summer on the best of pasture.

Every farmer ought to raise a quantity of roots for feed if possible as they will keep the stock in healthy condition.

During the prevalence of the epizootic I was feeding my horses with carrots, morning and night, and they never got the disease. My neighbor's horses were suffering with it more or less. I did not know at the time that the carrots saved my horses, but some time later I read in a paper that a doctor, I believe in South Carolina, fed carrots to his sick horses and cured them.

It is very dry here yet, so dry that we cannot plow. If it does not rain soon we will not be able to raise any corn. Wheat sowed last fall did not come up.  
G. H. W.

Forrester Creek, Ness Co., Kas.

ANTHONY, Harper Co., May 11.—In the last two weeks I have traveled north through

Kingman, Reno, part of Rice and part of Barton counties, and returned. The general complaint is dry weather. There has been some rain in places that has done some good, but there has been no general rain yet. In some places the early fall wheat is past redemption, and on ground where wheat was sown on light plowing, it has failed entirely.

Up near the center of the state the farmers are waiting for rain before planting corn. In Reno and Kingman corn was being planted. Here, nine miles from the Indian Territory, corn is being cultivated and has a good color.

Late rains make the farmers look more hopeful, but the fall wheat must be light no matter how seasonable from this on.

I think the law requiring the posting of strays should be more extensively advertised. For instance, the county papers should be required to publish the law occasionally, especially in these new counties. I think the law is complete, if all are informed, and the advertising in the FARMER makes it available to all in the state. There are a great many taking up strays and do not know what to do with them.  
M. W. HALSEY.

LOWELL, Cherokee Co., May 3.—The weather has been quite cool for a few days, with two or three white frosts, but no damage done yet. Corn about all planted. A few have commenced plowing corn. Some complaint of a poor stand, owing, I think, to the heavy rains. The prospect for wheat never looked better, also oats and potatoes; in fact everything is encouraging for the farmers.

A great many people in this part of the country are greatly alarmed at the terrific storms that have passed through our country in the last few weeks.

The burnt district in Galena is being rapidly built up.

Wheat is worth \$1 to \$1.10; corn, 30c; oats, 30c; potatoes, 60c to \$1. Short Creek is a good market for the farmers in this part of the country. Fair prices for everything. We like the FARMER very much. W. H. TRYON.

MACKSVILLE, Stafford Co., May 8.—It still continues dry. Wheat is gone. Oats, corn and all kinds of seeds that have been planted this spring are still under ground. Some corn planted and considerable ground ready to plant. A bad spring for setting out trees and cuttings.

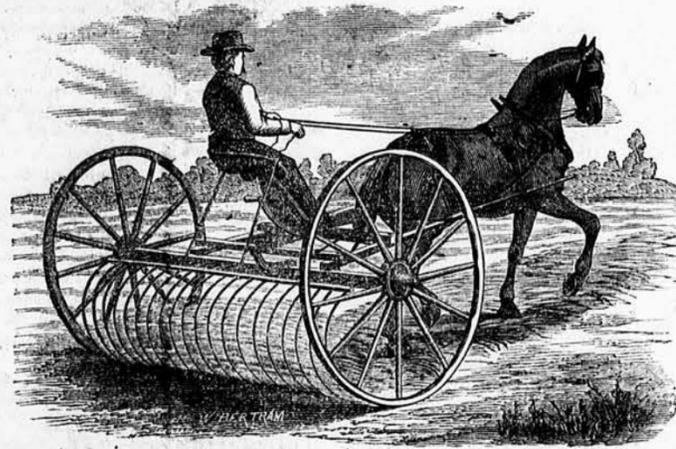
Had a light shower April 26th, also one this morning, May 8th. Will do no good more than to liven up the grass.

Cattle and sheep are looking very well, and young lambs are doing very well, considering the scarcity of green grass which is coming on very slowly.

A good many of the settlers who were unable to stand it through another dry season, have put in what crops they could, and have now gone off to work, some east, others west, to work on railroads, haul ties, or anything to earn a living, and I hear they find plenty of work and very good wages. But there are a good many, I am sorry to say, in this the northwest of Stafford county, who are depending on the generosity of the people of east Kansas and the eastern states for supplies for their families and teams, until they can raise a crop. They have had two agents in the east of Kansas the past two months, who, I presume, touched the sympathy of a few, for they sent two car loads of corn, provisions, etc. They have two men selected now, one to go to Indiana and one to Michigan to solicit supplies.

They also have another scheme to raise money, that is by bonding the county to the amount of \$5,000 to buy supplies, but I do hope there are men enough in Stafford county to cause an abortion of this scheme. Even if they succeeded in bonding the county, after they discount the bonds for cash, the amount that is left would not furnish them more than four or six months at the farthest, then they would be just where they are now; they would have to work, beg, or issue more bonds to carry them a twelve months' longer, for they cannot expect to make themselves a living off their land in less than eighteen months. The main plea is it will give southwest Kansas a bad name if the settlers have to earn even their living. Let me ask, who commands the most respect a laborer or a beggar? I think this wholesale begging by the settlers of frontier counties of Kansas, is getting to be a chronic complaint, and should be abolished as long as there is work to be had by which they can support themselves until they can raise crops.  
C. E. SEIBERT.

LANGDON, Reno Co., (164 miles southwest of Topeka,) May 15.—The drought continues here still, but on last Wednesday, at Hutchinson, twenty-three miles northeast of Langdon, there



A Prosperous Manufacturer.—The Coates' Lock-Lever Hay and Grain Rake.

We are glad to again say a few words in commendation of this famous and successful rake, manufactured by A. W. Coates & Co., at Alliance, Ohio. It is now fourteen years since the commencement of its manufacture, and in that time 65,000 have been made and sold. This year another 5,000 at least will be added to the already large aggregate, as Mr. Coates informs us that in several states, and notably Illinois, the sale is already assured for double the usual number.

Although of late years many rakes have been put on the market, but few have made a noteworthy success. The reason why the Coates rake stands at the front, is: 1st, it is a valuable invention, and 2d, it is honestly manufactured, so that its enduring strength and wear shall please the purchaser and advertise its good

qualities to his neighbors. While in general construction only the best materials are used and particular care is taken to build these rakes in reference to great strength, yet owing to the ingenious construction of the lock lever, so little force is required that it can be operated by a child. It is so nicely balanced that a touch of the lever, and the weight of the driver does the work. It is also made with the independent tooth which adapts it for clean work in uneven ground. The Coates rake received the silver medal at the Paris exposition, 1878, and was the only rake exhibited independently that received an award.

We have before referred to Mr. Coates' extended popularity as a kind hearted, public spirited citizen. His charities have been profuse and he has the firm friendship of his entire acquaintance. See their advertisement elsewhere in this issue.

NEOSHO FALLS, Neosho Co., Kas., May 1st.—SIR, we like your paper better the more we see of it. I think it quite the Kansas farmer's paper. We have had a splendid rain at last, so everything is looking lovely.

We have lots of hedge growing in this part of the county, and a great many trees on almost every farm, which makes the county look beautiful and homelike. We have been here nine years and we live in a forest of our own planting.

I was told currants would not grow here, but I have got forty thrifty bushes, most of them hanging full of fruit. Corn is mostly all planted, everyone planting all they could, the weather was so favorable for work. Cattle are getting their own living and looking better; sheep are increasing fast in this county. One gentleman brought in some fine Leicester's this spring; they make splendid mutton, which is a nicer meat in summer than pork. Fowls are doing well this spring; we have two hundred young chickens, some large enough to fry. I give the old fowls a soft feed once a week with a little salt and pepper and coal oil mixed in it. I think it keeps them healthy.

A great many trees have been planted this spring in this part of the county, and a good many early flowers out in bloom.

Corn is worth twenty cents, there is not much shipped but mostly consumed at home with cattle and hogs.

Some of our best farmers draw their manure on to the land. It pays to do so. It keeps the land from wearing out and makes plenty for another year.

If Mrs. A. B. Prescott will put her postoffice address in this paper I would like to send for some of her seed corn to plant.  
C. H. NICHOLS.

HUTCHINSON, Reno Co., Kas., May 14.—The exodus from the counties west of here seems to have begun in earnest. There is now scarcely a day passes but a number of teams may be seen on the back track. This exodus does not require a congressional committee to solve the cause of the movement. This time it is not the grasshopper, nor does politics enter into the question, but a sighing for the "leaks and onions" of a more plentiful region seems to be plainly written in every face. But I would not make light of so serious a matter. No one should attempt to conceal the fact that God in his providence has seen fit to withhold the rain till now. The second seed time has nearly passed, and no difference how fine or fertile the country may

be, or how much pluck and energy its people may have, without rain all agricultural efforts must fail, and there is no alternative left the people but to go.

We have had one good rain and two or three light showers this spring, and so well is the soil adapted to holding moisture that had it not been for the late freezing and the terrible winds things would have been in fair condition here now; but just as we had concluded to forego the pleasures of the savory peach for this season, and made sure that we would have a few delicate morsels in the way of cherries and small fruits, along came a sand storm followed by freezing nights and claimed the fruit crop generally, till we now only look to the grape and the never failing Kansas currant to grace our tea table.

Our farmers now have stock on the brain, and have it bad, and in my opinion if they will only keep it there it will be well for the country.

I have frequently noticed in the FARMER an opinion that the best way to increase the rainfall of the western part of the state is to break up the sod. My opinion is that if all the sod from here to the mountains were broken up and kept so for three years, we would be a desert indeed, for the wind would drift the fine dirt and sand till it would be unbearable and the heat radiated from the dry fields would disperse and drive away every bit of moisture wafted over them. So my conclusion, after seven years experience and observation, is do not break too much sod but let these plains be what nature has especially fitted them for; a place for "flocks and herds."  
C. BISHOP.

STAFFORD, Stafford Co., Kas., May 3.—We had a refreshing rain last Wednesday morning which not only revived the wheat but the farmer's spirits; also corn, oats and vegetables that were planted are up nicely. Those that were waiting for rain are now busily engaged planting. We need more rain, the ground being so very dry was not thoroughly soaked, not sufficient for sod breaking. We do not expect more than a passing shower until the snow begins to melt in the mountains of Colorado, and the Arkansas river and its tributaries are filled with water, which will produce more continuous moisture in the air; which will occur about the last of this month or the first of June. Then will be the time to plant rice, corn, sweet potatoes, beans, tomatoes and other vegetables.

Late planting is best in this portion of Kansas, as we don't have the early spring rains unless we have had a wet winter, then early planting will do. The ground should be moist and in good condition when the seed is put in to produce thrifty, well-flavored vegetables.

We don't always have dry weather in Southwestern Kansas as we have had for the last two years. In '77 and '78 we raised splendid crops, some pieces of wheat producing 25 bushels to the acre.

The production of wheat in this country depends upon the way it is put in. The ground should be deeply broken so that it will retain moisture, and thoroughly pulverized. The wheat drilled as deeply as possible. Wheat put in in this manner looks tolerably well, while that sown broadcast and harrowed in is fast dying out for the want of more rain. But very little spring wheat sown in this county.

There will be considerable Amber cane raised here this season. The molasses will be made in the immediate neighborhood and sold to the Larned sugar manufacturing company. It is a wise plan for farmers to turn their attention to something besides wheat, for it will not always do to depend on.

Several of our citizens have gone to Colorado to spend the summer but will be home before the fall election, as we expect a heavy contest for the county seat.

Our county is strongly in favor of St. John for governor and for prohibition. There is not a rum shop in the county, but there are two flourishing temperance societies, which speak well for our people. Mrs. C. M. JOHNSON.

CAMP POINT, Adams Co., Ill., May 5.—Wheat rather poor to start with, and Hessian fly working on it badly now. Weather very dry until the evening of the 5th when we had a rousing rain. On account of the drought the oats did not come well and are thin on the ground. The prospect for corn is highly flattering. Ground in most excellent condition. Everybody will have plenty of fruit and to spare. Distemper is raging in the equine world; the attacks are severe; many horses dying. Considerable cholera among chickens. Hogs and cattle healthy. Eggs, 4 cents a dozen—who wonders that the old hen gets disgusted and dies. Butter, 15c to 20c; corn, 25c to 30c; oats, 26c to 28c. Republicans are all crying, "Anything to beat Grant," and Democrats, "Anything to beat Tilden." Republicans don't want to swallow U. S. G. again. Ditto democrats and Tilden. J. M. STAHL.

Poultry.

ED. FARMER: I would acknowledge the reception of the basket of prize eggs from Mr. F. E. Marsh, Manhattan, Kansas. The manner in which they were packed and sent would indicate care, which must insure success to the enterprise of the Golden Belt Poultry Yards. I will, in compliance with the request, give in future, to the FARMER, the result of my success.

MRS. JAMES PALMER.

Poultry and the Poultry Essays.

ED. FARMER: Upon unfolding the paper this week we were just a little surprised to learn that you had rejected our humble essay upon poultry, although written the first week in March and sent from the Larned post office. We have looked in vain for a recognition even of our effort. We were not so much an aspirant for the prize of eggs, neither did we strive for literary honors, but we had a desire to exchange words of greeting with our sisters who are seeking for the best methods in this department of the farm.

We have just finished reading the very comprehensive article of Mrs. Walters, which in a brief manner really covers the whole argument. But we wish to ask one question relating to this subject, which we hope some one will consent to reply to if it is not consigned to the waste basket. In raising poultry it is expedient to pursue the same treatment with turkeys, guinea hens and geese that we do in our chicken culture? We have, in our limited experience, chickens and turkeys, and many of our neighbors have the guinea hens added to these. We had supposed that poultry raising was a general question embracing all kinds of farm fowls.

We enjoy the letters from your very able corps of contributors. Have been both entertained and benefited by reading from the different experiences given in your friendly columns. Hoping that our friends in the poultry business will meet with genuine success this coming season, we propose to give the figures, next fall, showing our profit and loss in one season's trial, if Pawnee county is not too high and dry for recognition.

MRS. GEORGE W. SPRING.

Pawnee, Kansas.

Raising Fowls for Profit.

The layers must be of a breed that affords chickens easily reared, for success in the nursery department is all important; they must be at the head of the list, of fair-sized eggs. Two breeds should be kept—sitters and non-sitters; only a few of the former breed. Half-breeds make good sitters. The sitters should be of a quiet disposition, and one that will sit when removed from one nest to another. Hens should not be set in the hen-house. They want a quiet place where they will not be disturbed. For early chickens set your hens the last of February, and then your pullets will commence laying in September and mostly lay all winter.

My method of raising chickens is to place the eggs under the hens in boxes, in the bottom of which dry earth is placed six inches deep. In very cold weather a newspaper folded several times is placed upon the earth. Then two or three inches of fine straw or chaff is laid in the box, and the eggs are placed upon it. I mostly set six hens at one time, and when they hatch I give all the chicks to three hens, and put fresh eggs under the other three and let them hatch again. One hen can take care of twenty chickens at a time. I think young chickens do better to put a hen in the coop with them than to put the young chickens by themselves. When a hen commences to hatch she should not be disturbed until the chickens are all out. When the chickens are small they should be fed often and all they can eat, should have plenty of fresh water or sweet milk to drink. I often mix their feed with sweet milk. I feed ground meal, scraps of bread and meat cut fine. Boil eggs hard and cut fine and mix with meal; one egg is enough for twenty chickens one day. Boiled vegetables are also good. Chickens need exercise, and do better to run at large than penned up.

To have plenty of fresh eggs all the year, you must take good care of your hens. Provide them with a dry, airy house and keep it clean. Don't put straw in your hen house, for if it gets wet it will create vermin. Dry earth is best to bed with. Lime is best to put in the coop for the chickens to eat and dust in. Tobacco sprinkled in the nests and coop will keep lice away. Put a little soda in their drink occasionally, and it will keep them clear of cholera.

I have lived on a farm the last six years, and raise on an average six hundred chickens a year. I am not troubled with diseases among them. In the six years I don't think I have lost a half dozen chickens from disease. I let my chickens have full run of the farm. They do but little damage to the crops. Our wheat is some distance from the house and they don't bother it. They eat some few vegetables, but they also eat the bugs and so save more vegetables than they consume.

In the summer I save the egg shells, and then when the ground is covered with snow, in winter, I pound the shells up fine and mix with their food, or else put them in piles in the hen-house. In winter chickens ought to have some meat. When your butcher save all the offal and boil for your chickens.

When you boil vegetables save the water you cook them in, and use it to mix your chicken feed with. In cold weather put a little pepper and ginger with their food. Vegeta-

bles are good to feed either cooked or raw. They are very fond of onions. I keep a trough by the side of the hen house, and feed all my spare milk to the chickens.

Fowls require plenty of fresh water in winter and summer, and need a variety of food. Oats, millet, buckwheat and corn are all good feed. Part of the grain should be cooked.

When hens are twenty months old sell them and keep your pullets, if you want plenty of eggs. Chickens require a warm place to roost in winter. I always take care of the chickens myself, and I always have fresh eggs in winter. My chickens at present are mixed breeds and good layers. When I get time I will give you a description of the thoroughbred fowls and tell which are the most profitable to raise. I will also tell how to build a cheap hen-house.

MAGGIE J. STORKE.

Camden, Morris Co., Kansas.

Apiary.

Cyprian Bees, a Superior Race.

No doubt the thousands of readers of the American Bee Journal will be glad to hear that the Cyprian bees are superior to any other in the hands of some of the most experienced European bee-keepers. Being determined to ascertain whether or not the Cyprian bees were superior to all others, I procured the assistance of Mr. Frank Benton, who has experience in queen-raising, and is able to speak the different languages required in the enterprise, and in January we started for the Island of Cyprus. But I was determined, before importing, to go through Europe, visiting all those persons who have had experience with the Cyprians, and if they did not convince me of their superiority, to return home without going further than Italy, and importing Italians. Having visited the principal apiarists who had Cyprian bees, and learning all that is known of them, in Europe, I am greatly pleased with the information I received from all quarters, and especially from those who never sell colonies, queens or bees; such persons as Count Kolowrat, Krakovsky, Edward Cori, Directory Chancellor, etc. The count directed Cyprian queens for his own apiary, when one would cost \$200. His apiary is one of the finest in Europe. He thinks the Cyprians, regardless of cost, much superior to all others. When I visited him, he gave me a very warm reception, which I shall ever remember with pleasure. He stated that when all his other bees wintered poorly, the Cyprians wintered well, and when his others would dwindle down to a mere handful, the Cyprians would be strong, and their hives overflowing with bees before the others would be strong, thus enabling them to secure large yields of early honey.

They breed early and late, going into winter quarters very strong, and with young bees. Some of the principal breeders in Italy intend to get the Cyprians to improve their stock. If they decide that the Cyprians are superior to the Italians, will they not be very valuable to us, in America?

Being satisfied of their superiority I have purchased a large stock of lumber and nails for hive-making, and also a lot of superior loaf sugar for queen cages, wire cloth, carpenter's tools, and everything required in an apiary, and have shipped it to Cyprus. Being a British subject I have secured through the British government the assistance of its officers there, and from a gentleman of Austria, the assistance of the Austrian consul.

We shall doubtless be able to start a large apiary, in spite of the superstition of the natives on the island, who stop up all their hive entrances, and fumigate the hives and yards to drive away the influence of the witchcraft that might be practiced on them, after one of us has been around. As soon as possible I shall purchase a large number and start a bee-farm and queen-rearing establishment, and as soon as I can, I will return to Canada, bringing with me all the queens I can secure. Mr. Benton will remain in Cyprus and take charge of the bees, rear queens, and ship them to me, or the parties in Europe who have ordered them, after the supply is sufficient to meet the demand. Those who have been importing heretofore, have been delighted to learn that Mr. Benton will remain on the island, and asked us to import for them. We have with us the count's shipping cages in which to send him queens. We have also received orders from Messrs. Cori, Gravenhorst, Schroder, and others, who will have them, regardless of cost. I will write as often as possible and give readers of the Bee Journal the Cyprian news, and keep them posted on all points of importance.—D. A. Jones, in American Bee Journal.

Miscellaneous.

The Construction of Drains.

A portion of almost every farm would be benefited by proper drainage, some by surface drains and others by underdraining, but many farmers are deterred from attempting either, owing to the general want of knowledge in the art of draining and its advantages. Others, again, belong to that numerous class who, while they will admit that an experience, and an apprenticeship even, is necessary to qualify one to judiciously practice some arts or trades, claim that any man of common sense should be able to dictate to stone-masons, bricklayers and carpenters in the construction of a house or a barn good enough for a farmer, and to engineer his own drains. Such knowledge they seem to think is intuitive.

It is not easier to conceive of a greater fallacy, or any idea more remote from the truth. Venerable, intelligent architects and civil or

draining engineers, who have devoted an ordinary lifetime to their professions, find in almost every new job a necessity for more experience and more intelligence in their professions.

If this be true, and it is, how absurd it is for a person who has had no experience in designing buildings of any sort, (except, perhaps, straw-hovels) to conclude that it will be more economical for him to contrive the plans for buildings that he may require, than to employ a skilled architect, who would only charge five per cent. on the cost of the building, for full plans, specifications and superintendence of the construction, which is the regular fee according to the schedule of prices of the members of the American Institute of Architects.

He must be a very inferior architect if he cannot save his client three to five-fold the amount of his fee. Besides, he will be able by his skill and experience often to save in material more than the amount of his fee. Then he will be able for the same or less money than the novice would expend, to supply many comforts, conveniences and real luxuries too, that the family would have been deprived of generations, but for the party who desires to build, having done as all sensible people do, i. e., go to a tailor for clothing, to a shoemaker for shoes, to a watch-maker or vender, for timepieces, to an architect for plans for buildings, and to a draining-engineer for instruction in draining, in short to encourage legitimately all artisans, which is true economy. Nothing is more common with natural born architects than for them to blunder in, blunder on, but not through with a building, for they know so little about what material and labor was requisite to complete a given job, that the cost often so far exceeds their random guesses, that the work must be discontinued while in an unfinished and frequently in a very inconvenient and unsightly condition for want of means to complete, which discomfiture and mortification would have been prevented had he acted more discreetly and not undertaken what he could not do. This applies with equal force to the engineering of drains.

I would not have premised at such length on the fallacy of the common course of farmers above described, had I not known of numerous instances where the course condemned was practiced, and the silly principal and his family have had anything but pleasure from the unwise expenditure.

Mr. Editor, if you will publish what I have written, and we can only induce one reader to heed what I have counselled, we should be satisfied, for the one example of discreet practice cannot fail to exert a wholesome and extended influence. Such has been my experience during the forty years that I have practiced as an architect and engineer.

THE DRAINS.

Whether drains to be executed are open surface ditches, or underdrains, and it is practicable to use plows for the entire construction, or for preparing the soil for shoveling, the economy of their use will be immense.

I have constructed miles of open ditches solely by the use of the plow, by opening a marginal furrow on either side so remote from the proposed center and deposit portion of the ditch that the banks of earth moved by repeated plowings will not be unsightly, nor so high and steep that they will obstruct the crossing of carts, wagons, mowing-machines and hay-rakes when the work has been completed. The furrows are to be turned right and left and the open furrow is to be where the center of the ditch is to be. At each successive plowing the marginal furrow should be one furrow within the last preceding one. The distance that the first marginal furrow should be from the center of the ditch will depend on what depth it is to be when done. I have made open ditches by this method which were, when completed, three feet six inches in depth, which depth was required for the proper discharge of water from lateral underdrains. In such cases I plowed the first furrow forty feet from the center of the ditch on each side and repeated the plowing nine times. That left the grade a proper one for setting with grass. It will be obvious that so many plowings must leave a broad belt in the center of the excavation of subsoil, which is usually too barren to grow grass, hence it must be fertilized.

A dry time should be availed of such work, that water may not interrupt the work. I have in some instances been obliged to make a temporary dam, and by a few open furrows divert the water from the main ditch until the grass seed was up. When I seeded the barren portion of the ditch, I fertilized the ground with both well decomposed and long or straw manure. The former should be applied and harrowed in with the seed, and the long manure should be applied as a top-dressing.

As work of this nature is designed to be permanent, it should be excavated in the most thorough manner, and to this end nothing is more desirable than to get a strong set of grass over the entire new surface formed by the plowings. Unless the fall in the direction of the waterflow in the ditch is too great, the water will not destroy the sward or the gently sloping banks of the ditch, once it is formed. The new stream bed thus constructed will be so wide and the water will run so shallow that it will not wash the bottom or banks. The ditch should be as straight as is possible.

If the site of the open ditch to be constructed in the use of the plow has a slope or fall to one side, as well as in the direction of the flow of the water, the furrows may, by the use of a hill-side or reversible plow, all be turned to the lower hillside, instead of to the right and left, as they should be in case each bank is about the same height.

There is no method by which earth can be moved so cheaply as by plowing, when the use

of the plow is practicable. Allowing a pair of horses to walk with the plow twenty miles per day, and plow a furrow one foot in width and six inches in depth, they would move 52,800 cubic feet of earth one foot every day. The reader can compare his work with manual labor, when he will find the above assertion with regard to moving earth with a plow, to be true.

I have used in drain construction both open and underdrains, two plows, manufactured by Speer Bros., of Pittsburg, Pa., more than twenty years, and have found them to be the only plows made that are perfectly adapted to ditch construction. One is a right and left-hand, hill-side and flat land surface plow, the other a right and left-hand sub-soil plow, specially adapted to following the other. They are constructed entirely of iron and steel, are both very strong and durable, and withal very cheap. I think that, at the present price of material, they will cost about \$14 each, and, if used judiciously, will pay their cost every four weeks.

These plows may be used instead of picks in the excavation of underdrains, in which work a pair of horses, plow and man will do more and better work than eighty men with picks. The above-named sub-soil plow is the only one that I can recommend.

As the straw manure applied on the newly seeded surface described, is liable to be blown off, and thus expose the young grass plants to destruction by drought, I have adopted a method of anchoring it effectually, that is inexpensive. It is simply to arm a man with a spade in each hand, and direct him to chop into the mellow earth the straw at intervals of one foot each way.

I had supposed to bestow on those who desire to drain, much other important detail pertinent to this subject, especially with regard to the construction of underdrains, but I fear that I have already transcended the space that you can afford to a subject that not one in one hundred of your readers know nor care anything about, but this is for the one per cent. who do. The plodders will look on and gradually drift into the wake. J. WILKINSON.

Brooklyn, New York.

Some of Our Feathered Friends.

Birds have always been the companions of man in his rural labors. With their beautiful, ever-varying plumage, their swift, graceful motions, and their delightful, melodious songs, they have ever cheered his labors, lightened his care, and made life brighter and its burdens lighter by their presence. If they had no other claims on our consideration, these would seem to be sufficient to insure kind care and protection from all who are permitted to enjoy their delightful presence. But though these services are valuable they are of minor importance to those which they render as destroyers of our insect enemies. But so quietly and unostentatiously are these services rendered, that few people have any conception of their value or importance. Could the eyes of farmers be open to the full extent of the ravages of these insect enemies, they would stand aghast in utter consternation and despair. The rapidity with which insects increase is perfectly astounding. A female potato beetle, in confinement, laid 1,200 eggs. Supposing half of these to produce females as prolific as the mother, the third generation, or second brood, would amount to 720,000, and the next to no less than 432,000,000 beetles.

Certain species of plant lice are said by Reanmer to produce 6,000,000 progeny during the season from a single female. Curtis says one female moth may produce, in a single year, no less than 16,000,000 caterpillars. The female mole cricket lays from 300 to 400 eggs. The loss occasioned by the various insect tribes is beyond our knowledge and is fabulous in amount. The Rocky Mountain locust, the chinch bug, the cottonworm, the Colorado potato beetle, and numerous other insects, have laid the crops of the nation under contribution to the amount of millions of dollars annually.

It is asserted by those who have investigated the question with great care, that the country suffers an annual loss from the ravages of insects that does not fall short of \$300,000,000. It is evident that if these destructive tribes were permitted to multiply unchecked, they would soon reduce the country to an arid waste. Birds are man's most efficient helpers in holding them in check. The value of birds for this purpose is not appreciated as it should be, probably because its extent is not known.

Swallows destroy vast numbers of insects. It is asserted that a pair of swallows while feeding a brood of young, will destroy 3,360 caterpillars in one week. A pair of sparrows were seen to carry 500 insects to their nests in one hour. A golden robin has been seen to eat seventeen caterpillars in one minute. The robin is a great insect destroyer; especially feeding their young on tender grubs, earthworms and caterpillars. The woodpecker family lives, during a large part of the year, on the larvae of wood-eating insects, manifesting great skill in discovering their lurking places beneath the bark of trees, and in uncovering their retreat and bringing them forth to be eaten.

An observer counted 206 visits made by a thrush in one day while feeding her young. A prairie chicken (grouse) was killed near Hutchinson with the heads of 100 locusts in its crop and gizzard.

These are but few of hundreds of instances that might be mentioned to show that the feathered tribes are very efficient auxiliaries in subduing the noxious insect tribes. As might be expected, the presence or absence of birds in considerable numbers, has a very definite influence on the success or failure of crops. At one time a bounty was paid in Prussia for killing birds, but at the end of two years the insects

had so increased that the crops were in danger of total destruction, and the authorities hastened to encourage and protect the birds. In Virginia and Carolina a war was waged against the woodpeckers under the mistaken idea that they were injuring the timber, but when the birds were gone the larvae of certain timber beetles so multiplied that thousands of acres of pine timber was soon killed by their injuries.

At Bridgewater, Mass., in 1820, at a great shooting-match, birds were killed in such numbers that they were sold to farmers by the cart-load for fertilizers. This destruction of birds was soon followed by an increase in the number of injurious insects that the herbage died very extensively and crops were very seriously damaged.

Similar examples might be multiplied almost indefinitely, all going to illustrate and prove the fact that the presence and assistance of birds are necessary to enable us to contend successfully with the injurious tribes of insects.

The lesson to be learned from all this is, that instead of shooting birds on sight, or permitting others to do so, the farmers and gardeners should use all available means to protect and cherish them. Our excellent bird laws should be rigidly enforced against all who would wantonly destroy these our best friends.

L. J. TEMPLIN.

Hutchison, Reno Co., Kansas.

Tree Experience.—No. 8.

BY B. F. HANAN.

MULBERRY.

I brought a few white mulberry and six black mulberry trees from my Missouri nursery, and set them out in the spring of 1876. The white variety has made a strong growth, very bushy and spreading; but the black sort have grown very slowly, and branched but little. They were one year old when planted out and one to two feet high. The black sort are now but two to three feet tall, while the white ones near them are eight to ten feet. They are on very sandy land.

I bought one hundred Russian mulberry trees, one year old, in the spring of 1877, and set them out in the most sandy part of my timber claim. They all lived, and have grown about like my white sort, and about as fast. I have added to the plant since, by trees purchased and by my own propagation, until I now have about 300. Those I bought were grown from seeds by the Russian Mennonites, northeast of Hutchinson, on the Little Arkansas river. I propagated by cuttings and layers. I was very successful with layers. I took sixty layers from one tree this spring which had been set out three years, and bore very full last year of a purplish black fruit.

On the 26th of April, 1880, the thermometer stood at 30 degrees above zero at sunrise, and the young leaves on my White and Russian mulberry trees were frozen until they dried to a crisp; but the black sort were not injured at all. They are all starting again, and so are other trees whose leaves were killed.

POPLAR.

I have planted a few Balsam poplar or Balm of Gilead trees, which flourish as well as cottonwoods and grow nearly as fast. I have also planted a few hundreds of Lombardy poplars. Those planted out in the spring of 1876 had all their leaves eaten off in the fall of that year by Rocky Mountain locusts. Started a new growth late in the fall, and in consequence of unripened wood, were all killed in the winter. Others planted out since have lived and grown as well and nearly as fast as cottonwoods near them. Several of them died last summer and winter from having their leaves eaten off last summer by a large worm and by the drouth combined, I think.

WILLOW.

I have tried the Golden, Basket, Gray or White, and Weeping Willow—the old Babylonian variety. None of them have done well, in fact nearly all are entirely dead except one clump of White willows on very sandy ground, which are doing but poorly. Yet cuttings of White and Weeping willows set in the spring of 1877, grew over six feet high that year, did poorly in 1878 and died entirely in 1879. The Golden and Basket sorts grew well that year from cuttings, but not so fast as the others; but all died last summer, from the drouth, I guess.

I brought one wild cherry tree with me from Missouri, which grows well and is healthy, although on almost pure sand. I have a tree or two each of Red and White elm, birch, coffee bean, sycamore, and Medicine River Mountain ash. They all seem healthy but grow slowly, and are not valuable for timber or windbreaks, in my opinion.

WAKEFIELD, Clay Co., May 3.—We have had a shower! It wet down about four inches. It will save the Red May winter wheat, but the rest will probably not be worth cutting. Peaches, pears and plums on the high prairie not to be seen. Cattle and hogs coming out of winter quarters in good condition. Hundreds of teams passing through to Washington Territory. Our little town looking up. A fine church is going up under the superintendence of Bro. McDowell, of the M. E. Conference. Milford, five miles to the east of us, is to have a sorghum factory run by a 35-horse-power steam engine; expect to make 300 gallons of syrup a day. I sent for catalpa seed; got holly and vanilla. How shall I sow or plant them? Mr. Bachelor is appointed postmaster in Wakefield. M. S. F. BURT.

There are very few sermons preached which better sum up the whole matter than the speech of the little boy who said: "I want to grow good and gooder every day of my life. Amen."

Patrons of Husbandry.

The Grange Influence Generally Felt.

No man ever succeeded in his life's business whose thoughts and feelings were not bound up in his work. A lucky hit may occasionally occur, and prosperity set in with a full tide—but too often the result verifies the old adage: "easy come, easy go." It is not saying too much to assert that farmers, until recent years, took no special pleasure in their occupation. It was rough and hard work. No effort seemed to be made to lift the burden. The work began with the early dawn and scarcely ended when the twilight closed. Markets were distant—roads heavy—prices low—money scarce. As essential as agriculture was to all other departments of national industry, the public estimate placed it on the lowest plane. There was nothing done to lift it out of this state. It was a natural result from the condition of things that the farmer should be considered the "maud-sill"—the foundation stone for a grand super-structure—but rough and unpolished. This has been changed. The farmer of to-day recognizes his importance in the body politic and the importance of his occupation to the public prosperity; and quite as much to the purpose, these are being recognized by the whole country. It will be hardly just to claim that the altered relations are altogether produced by changed conditions. Out of these changed conditions has come an appreciation of the wants of the farmer and of the claims of agriculture. He sees that the latter is not a mere routine of labor, whose fullest development demands the broadest knowledge, and a practice sanctioned by science; and that he himself must be taught in all that appertains to his calling and his duties. No single factor has appeared which has exerted so controlling an influence in this respect as the grange. Its essential principle is, that the farmer must be a man of thought and culture.—Grange Bulletin.

Grange influence is now so widespread that no apprehension of decline can possess the hearts of the most loyal patrons or the most unscrupulous demagogues. It has stemmed the tide and floated so heroically with the current of maligning influences that its most sanguine and daring enemies have started on a retrograde movement and within themselves resolved that while they must die the grange will live.

The work of upbuilding must have a firm, tenacious grasp upon the minds of all energetic and zealous patrons of subordinate and county granges. In furthering such work we incline to the opinion that the best and most feasible plan would be to lay considerable stress upon the educational and co-operative features of the order. Give the farmers to know that through an intellectual understanding of their needful wants they are proof against the machinations of demagogues, whose most vulnerable points are in finding ignorant and indifferent farmers to practice their deceitful cunning upon. Let all farmers be given to understand that in the co-operative feature of the grange they have unlimited protection against the extortions of monopolist corporations or marauding middle-men.

In order to more firmly bind yourselves to the work, fellow patrons, you must be punctual in attendance at your meetings, thereby showing to your brother farmers yet outside of the gates that you have a permanent interest in the order that you would have them also join. If you display indifference by staying away from these meetings you can expect to give no aid in this great work of upbuilding.

It is now in order for every patron and matron to form good resolutions to obey the recommendations of the state and national granges. Therein lies the sequel to grange perpetuity.—Farmer's Friend.

The Farmers' Alliance, of England, had great influence in the recent elections in that country, and its president and forty other members were elected to the new parliament. It drew up sets of questions on the land laws and agricultural reform, which were presented to country candidates of whom "an astonishingly large number expressed their willingness to support what the Alliance urged as necessary." By thus forcing candidates to express their sentiments on questions of agricultural policy, the farmers knew for whom to vote, and secured action in advance on what is of the utmost importance to their interests.

The thorough earnestness of British farmers in this matter is illustrated by the defeat of Mr. C. S. Read, a tenant farmer, who occupied a seat in the last parliament, and was considered the leader of the agricultural interest; but he attacked the Farmers' Alliance, imputing bad motives to it, and his political head was cut off. There is now no reasonable doubt that decided reforms in the land, game, animal, tax, educational, and other laws of Great Britain and Ireland will soon be accomplished, to the benefit of all classes, though most directly to tenant farmers. The example of this Farmers' Alliance may well be followed by American farmers in the coming elections.—Land and Home.

The last number of the Canadian Farmer gives a still better showing of the progress of the Order in Canada. It briefly announces: "The grange in Canada of to-day is quite a different institution from that of four years ago. Then it was in its early infancy, with broad unturned fields of action before it; to-day it stands as an organization whose principles have been tried and found to stand the test of trial. An impetus has been given to the farmer's life, thought and study have been brought to bear,

through its influence, upon the work of the farm. Our young people begin to see that farm life can be made agreeable and honorable, that there is room and opportunity for cultivated intellect. That while following the plow and cultivating the soil, they can find opportunity to cultivate the mind. The grange has taught them this, and has given them golden opportunities. Parents, support the grange for your children's sake. Young people, support the grange for your own sakes."

No combination of causes has done so much to make the farmer satisfied with and proud of his occupation as the order of patrons. It has clearly demonstrated the disabilities, short comings, losses and enforced low estate of the farmer, and indicated the remedy; and thousands all over the country have profited by the lesson. Through its influence agriculture to-day is more honored and believed in than at any former period. Nor has it been mere idle sentiment—the vain glory of a new-found strength, but the confidence and stability of broader knowledge, a higher farming, a truer and nobler manhood.

Communications.

Black Crookneck vs. "Early Amber" Cane.

In the FARMER of April 23rd Geo. F. Thayer of Independence, Kas., says the Early Amber will produce more gallons per acre, and of finer quality than anything in the cane line he ever saw. Now, I infer from the last quarterly report from the state board of agriculture, that he has not tried the Black Crookneck. Not because it says so in so many words, but from one county reporting it, (Ellsworth).

To test the productive qualities, &c., of both in the coming season, I will send to him, a package, for simply stamps to pay postage; provided, he report success or failure, through the FARMER—report to cover time of planting, soil, drilled or hills, cultivation, &c., and method of working up, ect., together with yield and quality.

Or, if Mr. Thayer prefer, I will plant one-half acre of Black Crookneck, on common soil, no fertilizers to be used, as against his one-half acre of Amber, and both to report through the FARMER the result in full, and both to send certified sample, (prepaid) to the KANSAS FARMER; Editor to "report" as to quality. The Black Crookneck is a late ripening cane, large stalk, rather short jointed, withstands wind first-rate, tops usually turn down when maturing; seed tops black and heavy when fully ripe. I have tested it two years and pronounce it better than the Early Amber, except as to earliness. I have the genuine Minnesota Early Amber. I do not condemn the Amber by any means, for that and the Crookneck are the two kinds only, that I shall plant this season, except it be to test a small quantity of one or two other kinds.

I hope more of the cane growers of our state will report their success through the FARMER, and would suggest that some of them give us the "plans" for furnace and kind of evaporator; comparative merits of iron as against copper pans to evaporate in; also, who has made a success of burning the crushed stalks for evaporating purposes, and method of thus using them. I propose experimenting a little farther this fall in using crushed stalks for fuel, and will tell you how we succeed, notwithstanding Mr. Hedges, of St. Louis, tells us not to experiment, etc.

I thought of trying steam for boiling, but will hardly be able to reach it this season, yet am satisfied that it is much better than direct fire heat, and cheaper in the end, besides making a better quality of syrup.

Believing a copper surface was better than iron for evaporating pans I wrote to the Blymer manufacturing firm of Cincinnati to learn if a copper coated iron could be had there. They replied in substance that they never heard of such a thing. The cane growers of this section want something heavier than common sheet iron, and yet not as expensive as all copper. We want thickness of metal at a price between copper and iron. In other words we want a thin copper coating on a heavier body of iron. It seems to me it can be made as well as to roll a thin plate of gold over an inferior metal.

As Mr. Hedges is a leading spirit in the sorgo business, why can he not give us the desired information. If he does I think I can tell him how to construct a furnace front to successfully use crushed stalks for fuel. Tell Mr. Hedges he need not experiment very much in that direction. Also, if he says that sorgo book of his is of a more recent date than 1862 or '65, I will send for one after awhile, and also, I will promise not to construct one of those sheet iron, wooden sided boilers to get "blowed up" as he did. W. E. FOSNOT, Ellsworth, Kansas.

P. S.—MR. EDITOR: If the above is too long, condense, and if you can call manufacturers attention to the above item of rolling a thin copper plate on a thicker iron it will, as soon as introduced, be a big thing for them, and be the means of adding vastly to the quality of the thousands of gallons of "Kansas cane syrup" now so universally made in common iron pans, and almost as universally made without neutralizing the acid, that almost immediately forms in the juice after grinding the cane. Acid in the juice acts on iron and makes black, strong, molasses, unfit for use, and brings a much less price, with as much labor and expense to make.

We claim the "brains" for "thinking up" this copper and iron combined pan and don't want any manufacturer to try to patent it. And you tell them we want it advertised in the FARMER.

WONDERFUL POPULARITY OF THE RENOWNED MEDICINE.

The Greatest Curative Success of the Age—A Voice from the People.

No medicine introduced to the public has ever met with the success accorded to Hop Bitters. It stands to-day the best known curative article in the world. Its marvellous renown is not due to the advertising it has received. It is famous by reason of its inherent virtues. It does all that is claimed for it. It is the most powerful, speedy and effective agent known for the building up of debilitated systems. The following witnesses are offered to prove this:

What It Did For an Old Lady.

Coshocton Station, N. Y., Dec. 18, 1878. Gents—A number of people had been using your Bitters here, and with marked effect. In fact, one case, a lady of over seventy years, had been sick for years, and for the past ten years I have known her she has not been able to be around half the time. About six months ago she got so feeble she was helpless. Her old remedies, or physicians, being of no avail, I sent to Deposit, forty-five miles, and got a bottle of Hop Bitters. It had such a very beneficial effect on her that one bottle improved her so she was able to dress herself and walk about the house. When she had taken the second bottle she was able to take care of her own room and walk out to her neighbor's, and has improved all the time since. My wife and children also have derived great benefit from their use. W. B. HATHAWAY, Agt. U. S. EX. Co.

An Enthusiastic Endorsement.

Gorham, N. H., July 14, 1849. Gents—Whoever you are, I don't know; but I thank the Lord and feel grateful to you to know that in this world of adulterated medicines there is one compound that proves and does all it advertises to do, and more. Four years ago I had a slight shock of palsy, which unnerved me to such an extent that the least excitement would make me shake like the ague. Last May I was induced to try Hop Bitters. I used one bottle, but did not see any change; another did so change my nerves that they are now as steady as they ever were. It used to take both hands to write, but now my good right hand writes this. Now, if you continue to manufacture as honest and good an article as you do, you will accumulate an honest fortune, and confer the greatest blessing on your fellow men that was ever conferred on mankind. TIM BURCH.

Duty to Others.

Chambersburg, July 25, 1875. This is to let the people know that I, Anna Maria Krider, wife of Tobias Krider, am now past seventy-four years of age. My health has been very bad for some years past. I was troubled with weakness, bad cough, dyspepsia, great debility and constipation of the bowels. I was so miserable I could hardly eat anything. I heard of Hop Bitters and was resolved to try them. I have only used three bottles, and I feel wonderful good, well and strong again. My bowels are regular, my appetite good, and cough all gone. I feel so well that I think it my duty to let the people know, as so many knew how bad I was, what the medicine has done for me, so they can cure themselves with it. ANNA M. KRIDER, Wife of Tobias Krider.

A Husband's Testimony.

My wife was troubled for years with blotches, moth patches and pimples on her face, which nearly annoyed the life out of her. She spent many dollars on the thousand infallible (?) cures, with nothing but injurious effects. A lady friend, of Syracuse, N. Y., who had had similar experience and had been cured with Hop Bitters, induced her to try it. One bottle has made her face as smooth, fair and soft as a child's and given her such health that it seems almost a miracle. A MEMBER OF CANADIAN PARLIAMENT.

A Rich Lady's Experience.

I traveled all over Europe and other foreign countries at a cost of thousands of dollars in search of health and found it not. I returned discouraged and disheartened, and was restored to real youthful health and spirits with less than two bottles of Hop Bitters. I hope others may profit by my experience and stay at home. A LADY, AUGUSTA, ME.

A Lovely Chaplet.

A late fashion report says: Nothing can be prettier than a chaplet of hop vines in blossom. A recent medical review says: Nothing can be better as a general renovator of the health than plenty of Hop Bitters. They aid in all the operations; toning up the weak stomach, assisting the food to become properly assimilated, and promoting healthy action in all the organs. The dictates of fashion, as well as the laws of health, alike favor a right application of hops.

My mother says Hop Bitters is the only thing that will keep her from her old and severe attacks of paralysis and headache.—Ed. Onecego Sun.

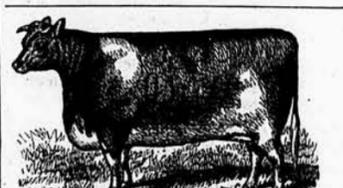
If you have a sick friend whose life is a burden, one bottle of Hop Bitters may restore that friend to perfect health and happiness. Will you see that that friend has a bottle at once.

Advertisements.

PUBLIC SALE OF THE "PLEASANT VALLEY HERD" OF CHOICELY-BRED SHORT-HORN CATTLE!—AT—Wyoming, Stark Co., Ills., Thursday, May 27th, 1880.



IMP. GRAND DUKE OF KIRKLEVINGTON 2d (34072). My herd having increased beyond the capacity of my farm, I have decided to hold a public sale of about 75 head on the day named above, at my place 3 miles from Wyoming, Illinois. There will be representatives of the following popular families; Ross Duchesne, Miss Wiley, Louan, Gwynne, Arabella, Frantic, Rosabella, Ruby, etc., etc., headed by the excellent breeding bull, Imp. Grand Duke of Kirklevington, 2d. Nearly all the young stock offered was sired by him, and their rich red color, fine style and individual merit, will convince any one of the superiority of their sire. I do not think a better sire can be found in the state, and his breeding makes him suitable to place at the head of any herd. His get are almost universally a deep red, and I feel warranted in saying there will not be a sale this season that will include so much individual merit and choice breeding combined. A choice lot of young bulls will be included. AMOS F. LEIGHT of Wyoming will offer about twenty head at the same time. Wyoming is at the crossing of the C. B. & Q. R. R. (Buda branch) and R. L. & P. R. R. Free conveyance to the farm. Lunch at 12 o'clock. TERMS—Six months credit will be given on approved note drawing 6 per cent. interest. 5 per cent. discount for cash. Catalogue ready by April 20th, and sent on application. W. SCOTT, Wyoming, Ill. Col. JUDY, Auctioneer.



PUBLIC SALE OF HIGH-BRED SHORT-HORN CATTLE, Tuesday, May 25, 1880. At my Farm, 3 Miles from Leavenworth, Kas.

I will sell at auction, at my farm, 3 miles from Leavenworth, Kansas, 51 head of high-bred cattle, consisting of 17 bulls and 34 cows and heifers of the following families: Princess, Georgia, Oxford, Lady Newham, Young Mary, Belina, Phyllis, Janthe, Lady Elizabeth, and other equally good and well known families. Of the 17 bulls one is by the 14th Duke of Thorndale and six by the 4th Duke of Hiltur. The cows and heifers are splendid, many being show animals. All red but six, roan. All the females will be bred or have calves at their sides, or both, on day of sale. All recorded and all guaranteed in all respects. TERMS. Six months on approved paper, with a rebate of 5 per cent. for cash. Sale will commence promptly at one o'clock. Catalogues sent on application after April 1st. J. C. STONE, JR., Leavenworth, Kas.

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

LEIGH CLASS POULTRY, G. C. GRAVES, Brownsville, Mo. (NEAR SEDALIA.) Breeder & Shipper. EGGS FOR HATCHING In Season. Send for Illustrated Catalogue, Free.

MAKE HENS LAY. An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose: one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & CO., Bangor, Me.

A. PRESCOTT & CO., TOPEKA, KANSAS, Have on hand

\$100,000 TO LOAN In Shawnee and adjoining Counties on good Farm security At 8 and 9 per cent. For Annum.

Breeders' Directory.

BLUE VALLEY HERD—Walter M. Morgan, Hereford Cattle and Cotswold Sheep, Irving, Marshall county, y. Kansas. Choice Young Bulls For Sale.

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

JOSHUA FRY, Dover, Shawnee county, Kansas, Breeder of the best strains of Imported English Berkshire Hogs. A choice lot of pigs from 2 to 3 months old for sale. Prices to suit the times. Correspondence solicited.

FOR SALE. Scotch and black & tan ratter pups, \$10 each; shepherd pups, \$15 to \$25; also pointers and setters. These are lowest prices. All imported stock. A. C. WADDELL, Topeka.

MILLER BROS., Junction City, Kansas, Breeders of Recorded Poland China Swine (of Butler county Ohio, strains); also Plymouth Rock and Brown Leghorn Fowls. Eggs, \$1.50 per 13. Descriptive Circular and Price List free.

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

MIAMI COUNTY NURSERIES, 11th year, large stock, good assortments; stock first class. Orange hedge plants and Apple trees at lowest rates by car load. Wholesale and retail price lists sent free on application. E. F. CADWALLADER, Louisburg, Kas.

Dentist. A. H. HOMPSON, D. D. S., Operative and Surgeon Dentist, No. 189 Kansas Avenue, Topeka, Kansas.

JAMES A. BAYLES, Lee's Summit, Jackson County, Mo., Has the largest and best Nursery Establishment in the West. Correspondence promptly answered.

Berkshires for Sale. I have a few choice pigs to spare. All eligible to record and as good as there is in the state. W. P. POPENOE, Topeka.

BERKSHIRES—AT THE COLLEGE FARM.

We offer for sale a few litters of very choice pigs the get of such noted sires as imported Mahomet 1979, G. I. Sias 3627—a son of Lord Liverpool—and others. "Sallies," "St. Bridget" and "Miss Smiths" in the herd. Pigs ready to ship now. Also

SHORT-HORNS, (Young Marys), of both sexes. Address E. M. SHELTON, Supt. Farm, Manhattan, Kansas.

HOGS. THOROUGH-BRED POLAND-CHINAS and BERKSHIRE Pigs and Hogs for sale. The very best of each breed. Early maturity, large growth, and fine style are marked features of our hogs. Terms reasonable. Correspondence solicited. RANDOLPH & RANDOLPH, Emporia, Kansas.

RIVERSIDE FARM HERD OF POLANDS, Established in 1868. I have in my herd the sow that took first money and sweepstakes, and the sow and bear under six months that took first premium at Kansas City Exposition in 1878, and the sow, boar and litter that took first premium and sweepstakes over all at the meeting of the Lyon County Agricultural Society in 1879. These pigs are all of my own breeding, and are competent for record. I send out nothing but first-class pigs. All stock warranted, and shipped as ordered on receipt of money. J. V. RANDOLPH, Emporia, Kas.

THE POULTRY WORLD (Monthly) and THE AMERICAN POULTRY YARD, (Weekly). Both publications are exclusively devoted to Poultry. Published by H. H. STODOLSKY, Hartford, Conn. The Poultry World is sent post-paid for \$1.25 per year; the American Poultry Yard for \$1.50. Both papers for \$2.00. A series of 12 magnificent chromos, each representing a standard breed of fowls sent for 75 cents extra, to all subscribers of either publication.

Eggs, Eggs. From pure Light and Dark Brahmas. Write to F. E. MARSH, Manhattan, Kas.

Eggs for Hatching. L. & D. Brahmas, Buff Cochins, Plymouth Rocks, Brown & W. Leghorns, Pekin and Aylesbury ducks' eggs warranted fresh and true to name. A few trice each of the above fowls for sale. All of the best and most fashionable strains. I also raise and offer for sale

8 Varieties of New Seedling Potatoes. All of the best; hardy, prolific and good keepers: Alpha, Beta, Burbank's, Snowflake, Early Ohio, Genesee County, King and Improved Peerless. J. DONOVAN, Fairmount, Kansas. Write for prices, etc.

Mound City Poultry Yards, Mound City, Kas. Breeder and shipper of pure bred Light Brahmas, Plymouth Rocks and Brown Leghorns. Am now booking orders for eggs as follows: Light Brahmas \$3.00, Plymouth Rocks, \$2.00 and Brown Leghorns, \$1.50 for 13 eggs. Chicks for sale after July 4th. Address S. L. IVES.

Bee Hives, Italian Bees. Eclipse, New American, Langstroth and Simpliciter hives complete or ready to nail. Full colonies Italian Bees in good movable comb hives. Honey Extractors, Bellows Smokers, Bee Books, &c. Descriptive circulars sent free. Address F. A. SNELL, Milledgeville, Cal. Co., Ill.

THE KANSAS FARMER.

E. E. EWING, Editor and Proprietor, Topeka, Kansas.

TERMS: CASH IN ADVANCE.

One Copy, Weekly, for one year, 1.50
One Copy, Weekly, for six months, 1.00
One Copy, Weekly, for three months, .50

The greatest care is used in selecting the best advertising space in these advertising columns. Advertisements of lotteries, whiskey blenders, and quack doctors are not received.

TO SUBSCRIBERS.

Subscribers should very carefully notice the label stamped upon the margin of their papers. All those marked 21 expire with the next issue.

Post Office Addresses.

When parties write to the FARMER on any subject whatever, they should give the county and post office both. Some of the new post offices are not put down in the post office directory, and when the county is not mentioned, the post office clerks do not know where to send papers or letters.

Wanted, More Self Respect.

We know of a prominent agricultural society in this state that has selected as its secretary a young sprig of a lawyer. Do farmers expect to get ahead in their business by such a course of proceeding? Rather how can they expect to succeed by such management?

To witness such egregious blundering, so much culpable folly committed by farmers, is discouraging, disheartening to every earnest worker in their cause. What are our public schools worth if they haven't afforded farmers and farmers' sons education sufficient to write letters and keep books as well as youthful attorneys?

You will find young attorneys all over the land elbowing their way to the front of all kinds of societies and organizations. This shows an individual enterprise which we are not disposed to quarrel with, but rather commend in the parties who do the pushing.

The legal gentleman aims to fill the public offices and direct public affairs, which are easily shaped to his own and his class' personal aggrandizement, by first filling the public eye, in getting at the head of small associations, becoming the mouthpiece of such societies, attracting to himself public attention, and by a very natural succession of steps he marches up to the front and claims to represent public opinion, which he rarely ever does.

Until farmers learn to act rationally and consort in a more business like manner, depending upon themselves, believing in themselves, tackling every problem they propose to solve with agents selected from among their own class, they will never be able to stand abreast with those whose lives are devoted to other pursuits.

We maintain that lawyers have become well nigh a useless class, that under their manipulations law has degenerated into a system of tricks, and that justice is little else than a myth of heathen mythology. By their tergiversations crime is unpunished and fostered, and honest industry is laid under three-fourths of the heavy public expense it has to bear.

in society. If we can bring the rural population to contemplate these abuses, and rouse their self respect, a great step in progress will have been accomplished. When you have honors to bestow, or responsibilities to bear, farmers, place them upon the brow and the shoulders of your own class.

Efforts to Protect the Live-Stock of the West.

In commenting on the efforts being made to urge Congress to adopt measures to prevent the spread of the cattle plague to the west, the Live Stock Journal of Chicago, as an illustration of the apathy with which the other and more aggressive interests view measures proposed in the interests of agriculture, and especially the measure which is now earnestly demanding action, we will mention the fact that when, in response to earnest solicitations, Judge Jones consented to go to Washington City to urge action upon the measures now pending for the suppression of contagious diseases in farm stock, we made application to Mr. Layng, general manager of the Pittsburgh & Ft. Wayne R. R., for passes for the Judge to Washington City and return, on the ground that it was a matter of public interest, and one in which the transportation companies were quite as directly interested as the farmers themselves.

But notwithstanding the fact that a bill has been agreed upon by those in charge of the matter at Washington, it is essential that our readers should make a special effort to awaken their members of Congress to the imminence of the danger that threatens us, and the importance of early action. To our certain knowledge the great cattle interest of the west has had several narrow escapes from infection within the past year, and before another session it may be too late to avert the threatened calamity.

The members of Congress from Kansas should be urged by their constituents, who have so great an interest in the cattle business, to give their earnest support to passing the bill now before Congress.

The contempt and indifference which the Pittsburg & Ft. Wayne R. R. manager and the majority of the men who constitute our Congress manifest toward the farmer's interests, is sufficient to rouse the pride and indignation of the whole rural population. If they can be brought to feel indignant at the humility of their condition there will be hope of rousing them to move in their own behalf.

White Beans.

In the excitement for new crops it is well not to forget or entirely overlook valuable old summer crops. Among the most profitable, and of ready sale, white beans deserve a prominent place. In Niagara and Orleans counties, New York, the bean crop is a leading crop, and we believe they could be raised with average profit in Kansas. The state does not yearly produce enough to supply the demand and beans are brought from other states in large quantities and retailed from the grocery stores at five and six cents a pound.

We drill them in with a drill manufactured expressly for beans, in rows about thirty inches apart, putting in about a bushel of seed per acre. We usually plant mediums, or "Whit-sboros," finding from experience, one year with another, that they prove most profitable. Care should be taken to select the very best seed, and all of one variety, so that they will ripen at the same time and will be uniform in size and color.

Canning Green Corn.

A correspondent asks us to publish a recipe for canning green corn. Canning green corn is not practicable with the ordinary family appliances. What the canners term "processing" for green corn is difficult and tedious.

Each month in the average dry years has the following percentage of the general average: January 57 per cent., February 70, March 84, April 105, May 92, June 68, July 46, August 43, September 61, October 62, November 41, and December 65.

Weather Laws.—No. 3.

SUCCESSION IN TIME.

By comparing the average, or what is better, by counting all those years as average in which the precipitation does not vary above or below the average more than a definite percentage of the mean precipitation, we can readily assort the years of extreme variation presented by the Leavenworth tables. Calling all those years wet years where the precipitation exceeds 15 per cent., added to the average, the wet years become 1837, 1844, 1848, 1851, 1852, 1856, 1858, 1859, 1865, 1870, 1871, 1872, 1876, and 1879.

Taking the difference from one wet wave to the next on this basis, the series runs 7, 4, 3, 4, 2, 7, 6, 5, 6, 3. Taking the difference of the dry series exhibit and we have 3, 5, 3, 4, 5, 4, 3. Throwing together as average years all those which do not depart more than 20 per cent. from the average and the wet years are then 1837, 1844, 1849, 1856, 1858, 1865, 1870, 1871, 1872, 1877 and 1879. The dry years were 1843, 1846, 1847, 1850, 1853, 1854, 1860 and 1864.

Taking the differences from wet to wet and we have 7, 5, 7, 2, 7, 5, 1, 1, 5, 2. The differences from dry to dry give 3, 1, 3, 3, 1, 6, 4.

TABLE OF MONTHLY RAINFALL. BEING YEARS HAVING 50 PER CENT. LESS THAN THE AVERAGE. Columns for months January through December with corresponding rainfall values.

The mean monthly precipitation of these dry years is as follows: January .53, February .94, March 1.12, April 2.59, May 3.22, June 3.73, July 1.75, August 1.75, September 2.23, October 1.15, November .93, December .89.

TABLE OF MONTHLY PRECIPITATION OF WETTER YEARS. LEAVENWORTH TABLES. Columns for months January through December with corresponding precipitation values.

Tabulating these averages with the averages published by the Smithsonian Institution, we may readily compare the distribution in the different kinds of years:

Table comparing average precipitation for wet and dry years across months from January to December.

Each month in the average dry years has the following percentage of the general average: January 57 per cent., February 70, March 84, April 105, May 92, June 68, July 46, August 43, September 61, October 62, November 41, and December 65.

In wet years the percentages of the average are as follows: January 109, February 160, March 198, April 141, May 154, June 122, July 182, August 126, September 130, December 181.

- 1. The great difference between a wet year and a dry one is found in the midsummer precipitation, a great excess following after the middle of June in wet years.
2. The principal precipitation tends to fall in the spring months in a dry year, and in the summer months in a wet one.
3. In wet years the floods tend to occur in

March, July and December, and in these years floods of the Missouri usually occur in those months.

4. The March floods usually result from snow or rain on the plains. The July floods correspond to the later melting of heavy snows on the mountains, and the December excess to extensive snows which usually succeed a wet summer and autumn on the plains.

5. In dry years there is usually no appreciable decline in the April and May rains.

6. Since cold winters and late springs tend to retard the spring efflux, a cold, stormy, snowy winter throughout the middle left of the plains and mountains, should rarely be succeeded by a dry midsummer.

7. A warm, dry winter and early spring is an unfavorable sign as to the abundance of precipitation for midsummer.

8. A mild, moist winter on the middle area of the plains, is not inconsistent with a humid summer, as witness 1877-78, followed by average summer rains.

These postulates are not offered as infallible guides, nor as the positive teachings of science, but as weather signs exceeding in value the many signs of the seasons in common vogue. Two of these signs are natural expressions of some of these same conclusions. Thus the abundance of rain succeeding the "filling" of corn, and followed by warm, growing weather, thickens the corn husks by an aftergrowth. The wet autumn also fills the swamps and flats above the average level with water, and the muskrat raises his house above the water level to get a dry bed to sleep in.

Some other curious relations appear to exist in weather successions, as to time and the order of passing from one extreme to the other. It is my purpose at present, when I have completed my lists of observations, to compare temperatures and precipitations year by year and month by month. Hot summers and cool summers, cold winters and mild winters, bear some relation to each other. If we can discover nothing else we can discover the limit to the succession of seasons of the same kind, as we have the limit to the succession of wet or dry seasons.

The relation of cyclones to the other phenomena is also a very interesting topic, particularly at the present time when some apprehension is felt that "Mother Shipton's prophecies" (as a set of forgeries made long after the death of that lunatic are called) has raised some apprehension that the world is to come to "an end" between this and 1882.

The discussion of the nature of revolving storms and their general distribution in place, comes later in this series, but since the question is now so frequently asked: "Are cyclones of more frequent occurrence now than in former times?" I propose to close this paper with a passing note on the distribution of storms in time.

The term storm has almost ceased to have any rational meaning. Everything is called a storm from a November drizzle to a mid-summer hurricane, and now that we have sand storms, electric storms, magnetic storms, wind storms, rain storms, snow storms, hail storms, etc., we are in great danger of lacking precision in any use that may be made of the word.

The first proposition I make is: As storms decrease in frequency they increase in violence.

This is true, I believe, of all the group named above. This follows as a necessary deduction from what has already been said on the law of maintaining the general average. Take it in regard to the violence of the winds: Since equilibrium must be restored in the atmospheric dynamics, then it is certain that a movement of wind in one direction with a velocity "v" and for a time "t" must be equal by another movement of the wind in some direction opposed to the former, with another velocity "v" for another time "t", and that v multiplied by t equals v multiplied by t, otherwise there can be no equilibrium.

There are two climatic regions where violent revolving storms, attended by deluging rains, hail, lightning, etc., are never known. One of these regions is where it never rains, and the other is where it rains by incessant drizzle during the whole season of precipitation. No hailstorms or waterspouts occur either upon the desert of Sahara or within the polar circles. In times (i. e. in seasons, years, or long periods), where these conditions are attained in any intermediate country for that time and that region during the presence of the drizzle or drought, the hailstorm, waterspout, etc., is precluded. They never occur at the place and time where the water supply is minimum or maximum. They never occur when the temperature is greatly below 60°. They never occur at the center of a vast area of drought, at or about the time when the drought is maximum in duration.

Cyclonic phenomena are the result of and not the cause of unequal distribution of heat and humidity between large areas. Suppose a zone "A" to have had an unusual water supply for the winters 1879-80, while another zone, "C," has also had an excess of precipitation during the same season. Suppose the temperature in "A" and the temperature in "C" has been below the average, but that between "A" and "C" lies a zone "B" where the precipitation has been light as a whole, and very unequally distributed, with a temperature above the average for the season named. Then will the humid strata of the air at or about the time the water in "C" begins to rise in the air in a maximum degree, sweep across "B" to the east of the center of maximum temperature, while the air in "A" being cooler and heav-

ier, having a lower longitudinal velocity, moves across "B" towards "C," to the west of the center of maximum temperature. Now about this center of rotation, storms will be frequent, upon whatever hypothesis we account for storms, and if the difference in temperature and humidity of the middle belt is considerable, that is equal to the maximum difference, then will these storms attain their maximum ferocity.

A whirling storm is not noticed, it utterly fails to get in the papers, or to become celebrated or historical, unless it is destructive to life and property to a considerable degree. Thus it happens that when storms are most frequent they are the least destructive and never set into the papers except as "blowing down the grain a little," but when the temperatures are most capricious and extreme in range, the precipitation excessive at unusual times, followed by long intervals without rain, then as the summer temperature is attained and the water in the soil is taken into the air to a distressing degree, then the disturbances in the atmospheric equilibrium become extreme, and though the actual number of storms decrease, the number of historical storms increase. There were fewer storms in 1878 than in 1877, fewer in 1879 than in 1878, and there will be fewer in 1880 than in 1879, but those that we have will for the rest of this year and part of next, be more appalling than those we have had.

For the region south of the Kaw, and possibly for all that region south of latitude 40°, and west of Topeka, the water supply has, in my judgment, passed below the line of dangerous storms "until after the drought."

As storms begin or have their point of origin in the latitude west of the local meridian where they are first observed, so the storm season begins and closes first at the southwest, and the storm season of 1880, like the storm season of 1879, will pass from southwest to northeast, by lines parallel to the path of the storm centers. The most destructive storms will occur to the southwest of Marshallfield, Missouri, for the spring season of 1880, and the next is very apt to be heard of as originating north of that point and passing eastward by a path nearly parallel to the path of the Marshallfield storm.

Cyclones, as periodic phenomena, belong to the transition period, between the periods of maximum and minimum precipitation, and their violence is proportioned to the extreme irregularity of atmospheric changes at the period of occurrence. This law, if well founded, gives destructive cyclones a periodicity in time similar to that existing in the thermal waves and rainfall curves. C. W. JOHNSON. Hiawatha, Brown Co., Kansas.

This is upon the assumption that there is no long period greater than two or three hundred years, in which phenomena of the one kind become maximum while those of the other become minimum. The longest drought mentioned in history I believe was the "seven year" drought in Egypt.

Heavy Fleeces.

We publish statement of weight of fleeces of 126 rams owned by Mr. G. H. Wadsworth, of Larned, Kansas; the heaviest weighing 49 pounds, and fifteen fleeces averaging 41½ pounds. The dust and sand storms in that county the present spring have doubtless added materially to the weight of these fleeces. We have no doubt that when the wool is cleaned that it will be found that fifty per cent. of the gross weight is dirt. Weighing wool in the dirt can never be a fair test.

We publish, on the first page of the FARMER, this week, another of Mr. Johnson's interesting articles on Weather Laws, which will doubtless attract more than usual interest. His philosophy appears to coincide so well with the weather, that we fear our agricultural readers will not find much comfort in a theory that seems to be so painfully true.

We publish Maggie J. Shore's poultry article this week and hope she will not forget her promise to tell the readers of the FARMER how to build a cheap hen-house; also her opinion on thoroughbred fowls. Any lady who can raise six hundred fowls in a season, should be a competent, practical teacher.

Prof. A. J. Cook of the Michigan Agricultural College, says that one pound of London Purple, dissolved in 100 gallons of water, is an effective poison for potato bugs, canker worms, leaf rollers, and all leaf-eating insects.

Several inquiries have been made for the post office address of Mrs. A. B. Prescott, which is Pierceville, Sequoyah county, Kansas.

Unquestionable.

The Herald, Detroit, Mich., says of Warner's safe kidney and liver cure: "Its efficacy in kidney, and all urinary diseases is so fully acknowledged that it is not worth the questioning. Eons of testimonials from well known citizens in public and private life are evidences strong enough to convince the most stubborn doubter."

"I Am All Played Out"

is a common complaint. If you feel so, get a package of Kidney-Wort and take it and you will at once feel its tonic power. It renews the healthy action of the kidneys, bowels and liver, and thus restores the natural life and strength to the weary body. Get a box and use it at once.

Set Back 42 Years.

"I was troubled for many years with Kidney complaint, gravel, &c.; my blood became thin; I was dull and inactive; could hardly crawl about; was an old worn out man all over; could get nothing to help me, until I got hop bits, and now I am a boy again. My blood and kidneys are all right, and I am as active as a man of 30, although I am 72, and I have no doubt it will do as well for others of my age. It is worth a trial.—[Father.]

Horticultural Societies.

We have received a circular from the Secretary, Mr. S. M. Tracy, of the Mississippi Valley Horticultural Society...

The Kansas State Horticultural Society, the Secretary, Mr. Tracy, informs us, is taking an active part in the work.

The call is signed by officers of horticultural societies representing most of the southern and western states.

The Annual Meeting of the American Association of Nurserymen, Florists, Seedsmen and Kindred Interests...

Among the objects sought by the Association are the exchange and sale of nursery products, implements, and labor saving devices.

The exhibition and introduction of new varieties of fruits, trees, plants, etc.

The cultivation of personal acquaintance of others engaged in the trade.

To procure quicker transit, more reasonable rates and avoiding needless exposure of nursery products when in transit.

To avoid the evils of dishonest tree agents, etc., etc.

There will be many other questions of much importance presented for discussion and the action of the Association.

Specimens of seeds, fruits, flowers, implements, etc., are requested for the exhibition tables.

For further particulars and full programme, address either of the officers of the Association.

D. WILMOT SCOTT, Sec'y, Galena, Ill. T. S. HUBBARD, Pres., Fredonia, N. Y.

Important to Book Agents.

Dr. Manning's long looked for object teaching Stock Doctor and Live-Stock Encyclopedia, with 1,000 pages, 400 illustrations and two charts...

H. Griffith, Topeka, Kas., will sell Jerusalem Artichokes at \$1.00 per bushel.

Our readers will do well to notice the advertisement of Hermon W. Ladd, XX Cot, in our paper this week.

Bogus Certificates.

It is no vile drugged stuff, pretending to be made of wonderful foreign roots, barks, &c., and puffed up by long bogus certificates of pretended miraculous cures...

A FAVORABLE NOTORIETY.—The good reputation of Brown's Bronchial Troches for the relief of coughs, colds and throat diseases has given them a favorable notoriety.

Facts vs. Theory.

In regard to the method of coloring butter. The theory is that cows when well fed and cared for will make yellow butter; the fact is that not one in ten will, except in times of flush pasture.

This is just the reason that the very best dairymen in this country use Wells, Richardson & Co's perfected butter color.

Grocers and Storekeepers pay 3 to 5 cents a pound extra for butter made with Gilt Edge Butter Maker.

Greater than Gold.

"I value Marsh's Golden Balm far greater than gold. It has cured me of incipient consumption, and my child of a terrible cough."

All Endorse It.

The "Recorder," American, Ga., says: "Clerks, senators, representatives, doctors, lawyers, citizens, in public and private life, are testifying by the thousands, and over their own signatures that a remedy has been found for Bright's disease of the kidneys and for diabetes; these are respectively known as Warner's safe kidney, and liver cure and Warner's safe diabetes cure."

Mr. T. K. McHathery of Topeka, has made arrangements to have his horses, Royal George, an English draft horse, and Kicapoo Ranger, at Silver Lake, Kas., the present season on the first three days of each week.

The McKay Bros. are going to start a large fish, oyster game, poultry, butter and egg depot in Denver, Colorado, early this fall.

The sale of lands during the month of March, by the Kansas Division of the Union Pacific Railway company, formerly Kansas Pacific Railway, were 16,474 acres.

One Box or Six Bottles.

If you are suffering from a combination of liver or kidney diseases, and constipation, do not fail to use the celebrated Kidney-Wort. It is a dry compound as easily prepared as a cup of coffee, and in one package is as much medicine as can be bought in six dollar bottles of other kinds.

Go to Skinner, the "Old Reliable" Shoe Dealer of Topeka, 212 Kan. Ave.

A Good Piano.

Frank Leslie's Illustrated Newspaper says: A good piano at a fair price is one of the wants of the times. An instrument that is durable, that is substantially made, and has all those qualities of tone which make a first-class piano, can be had from the Mendelssohn Piano Co., New York, from \$150 to \$400.

8 and 9

Eight and nine per cent. interest on farm loans in Shawnee county.

Ten per cent. on city property. All good bonds bought at sight.

For ready money and low interest, call on A. PRESCOTT & CO.

PRESCRIPTION FREE

For the speedy cure of Seminal Weakness, Loss of Manhood, and all disorders brought on by indolence or excess. Any Druggist has the ingredients.

Address DAVIDSON & CO., 73 Nassau St., N. Y.

Markets.

TOPEKA MARKETS.

Table of Topeka Markets including Produce, Poultry and Game, and Retail Grain prices.

Butchers' Retail.

Table of Butchers' Retail prices for various meats.

Hide and Tallow.

Table of Hide and Tallow prices.

Chicago Wool Market.

Table of Chicago Wool Market prices.

St. Louis Wool Market.

Table of St. Louis Wool Market prices.

Markets by Telegraph, May 18.

New York Money Market.

GOVERNMENTS—Strong and higher. RAILROAD BONDS—Irregular. STATE SECURITIES—Dull and weak.

COUPONS OF 1881—107 1/2 to 107 3/4. PACIFIC SIXES—107 1/2 to 107 3/4.

Kansas City Live Stock Market.

CATTLE—Receipts for 48 hours, 361; shipments, 210; market weak but quotably unchanged.

Kansas City Produce Market.

WHEAT—Receipts, 1,863 bushels; shipments, 3,673 bushels in store, 139,263 bushels.

St. Louis Live Stock Market.

CATTLE—Active for all good grades, and prices a shade better; supply moderate and mainly of medium to fair steers.

Chicago Produce Market.

FLOUR—Dull and nominal. WHEAT—Unsettled but generally higher.

St. Louis Produce Market.

FLOUR—Dull; fancy, 5 50 asked; choice, \$5 10 to 5 15; family, \$4 85 to 4 95.

Chicago Live Stock Market.

HOGS—Receipts, 20,000; shipments, 5,000; market active and somewhat higher.

Liverpool Market.

BREADSTUFFS—Market steady. FLOUR—98 to 128 6d.

London Market.

A cable to the Chicago Journal says: CATTLE—Dull; 15 1/2 to 16 1/2.

Denver Market.

FLOUR, GRAIN AND MEY. MAY—Upland, 23 to 25; second bottom, 21 to 22; bottom hay, 18 to 20.

New Advertisements.

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

100 ACRES PLANTED WITH BERRIES

100 varieties of selected fruits. Plants grown for transplanting and fruits for the market.

XX COT (not painted, White Duck \$2.)

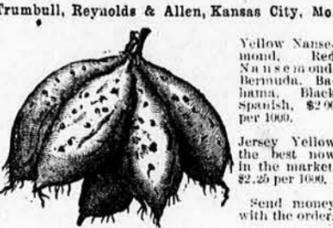
Painted Red, Brown, Yellow, Blue, Green, Black, White, etc. \$2.00.

HERMON W. LADD, 108 Fulton St. Boston.

277 Canal St., New York; 106 North Second St., Philadelphia; 94 Market St., Chicago, Ill. Send for Circulars.

Sweet Potato Plants.

Send your orders to the "Old Reliable" Seed House of Trumbull, Reynolds & Allen, Kansas City, Mo.



Pastura for Horses.

30 acres pasture to let for horses, 5 miles west of Auburn, Shawnee county, Kan. Water and salt in the pasture. Address F. O. BLAKE, Auburn.

SALESMEN WANTED

A Month and Expenses. ZIMMERMAN FRUIT DRYER CO. Cincinnati, O.

Kansas Seed House.

Fresh Soft Maple Seed. Per bushel, express charges not paid \$4.00.

Sweet Potato Plants.

Yellow Nansmond, Black Spanish, and Southern Queen. Per 1890, express charges not paid, \$2.00.

FRUIT DRYER & BAKER

OVER 11,000 IN USE. THE BEST IN THE MARKET. MADE ENTIRELY OF GALVANIZED IRON.

Simmons' Liver Regulator

I suffered for more than a year with indigestion and during the last six months I was very ill.

They are NOT put up in Fancy Picture Papers, illustrating improbable vegetables. They ARE NOT to be found for sale in grocery stores.

They ARE put up in plain paper, at the lowest cost. The purchaser, therefore, pays for SEED and not for fancy paper and printing.

They ARE sold by RESPECTABLE Merchants, Druggists, Grocers, etc., WHO BUY THEM OUTRIGHT, because they KNOW THEY WILL PROVE SATISFACTORY TO THEIR CUSTOMERS.

They ARE to be had in any quantity in papers—in 1/4 lb packages, in pints of Peas, Beans and Corn, or in 1/2 bushel packages.

IF YOUR MERCHANT DOES NOT KEEP THEM, send for Landreth's Rural Register and Almanac, containing catalogue and prices, and order them direct from headquarters.

David Landreth & Sons, 21 and 23 South 6th St., Philadelphia, Pa. [In writing to Landreth & Sons, please mention this paper.]

ASK YOUR MERCHANT FOR LANDRETH'S GARDEN SEEDS.

THE ABOVE IS A CUT OF CORNELL'S SICKLE GRINDER.

It requires but one to operate it, and grinds a true bevel with speed and ease for the operator. It also has an EXTRA WHEEL for Sharpening and Polishing CULTIVATOR SHOVELS, PLOW SHARES, etc.

An energetic Agent with small cash capital wanted in every county. Send stamp for descriptive circulars, price and terms to agents. Address E. A. GOODELL, Tecumseh, Shawnee Co., Kas., General Agent.

COATES' "INDEPENDENT TOOTH, LOCK LEVER" HAY AND GRAIN RAKE.

Patented Aug. 1867, Jan. 1873, June, 1875, and Nov. 1876. 60,000 now in use. Twenty Steel Teeth. No complicated ratchet wheels, friction bands, nor other horse machinery needed to operate it.

DEERE, MANSUR & CO., General Agents, Kansas City, Mo.

Patented Aug. 1867, Jan. 1873, June, 1875, and Nov. 1876. 60,000 now in use. Twenty Steel Teeth. No complicated ratchet wheels, friction bands, nor other horse machinery needed to operate it.

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Literary and Domestic

Faint Heart.

She stood before him, tall and fair
And graced on that summer day.
With June's first roses in her hair.

Literary Items.—No. 38.

ORIGIN OF A FEW COMMON EMBLEMS.—DEMOCRATIC ROOSTER.

The rooster is an emblem of the democratic party. A very good figure, by the way to represent success.

In Persia, and most eastern countries of antiquity, fire was an emblem of divinity. The followers of Pythagoras described God under the image of "a circle whose centre is everywhere, and circumference nowhere."

In a later period of the world's history, emblems have been introduced which owe their origin to particular circumstances, many of which, without an explanation are void of meaning.

The olive branch has ever been the symbol of peace. Crown of laurels, or the palm of victory, was a Grecian emblem of success, and these expressions are still retained in our language as figures of speech, and are most interesting to those who have studied their origin.

The Romans held geese in high respect. The Gauls attempted at night to climb the Tarpan Rock and take possession of the Roman Capitol. They were discovered by certain sacred geese, kept near Juno's temple, which alarmed the guards, and thus the Capitol was saved.

We might multiply many other cases in support of the democratic emblem—the rooster, in the attitude of crowing, and since other political parties have adopted the emblem, whenever success has perched on their banner it is only proper that it should have honorable mention, and its origin should be recorded. I will endeavor to give it as I received it from the lips of the late Governor Bigler, of Indiana.

In the year 1840, political matters were at the highest pitch. The whigs, under the leadership of General Harrison, were gaining proselytes from the democratic party. One of the leaders of the party in Indiana, received a letter from an old political co-worker. In that letter occurred the well known words, "Tell

Chapman to crow; crow, Chapman, crow." This letter was shown to a political friend who read it and laid it on the counter in the store. A "wild western whig" as "Old Mortality" would express it, caught sight of it and published its contents. Chapman, spoken of in the letter, was the editor of the leading paper in Indianapolis. This little incident caused much merriment at the time, and Chapman adopted the rooster in the attitude of crowing as the emblem of "Crow, Chapman! crow."

The log-cabins, hard cider, corn skins, hoop pole currency, which the old whig party ornamented their large mass meeting in 1840 originated somewhat in the same way. A writer from Ohio, to an eastern paper, said that if Gen. Harrison was furnished with some hard cider, a rifle to shoot game, he would be content to live in his old log-cabin, for the remainder of his days.—A citizen of Springfield, O., conceived the point—hence sprung forth log-cabins and all the other devices, to tickle the eyes and understanding of the working classes.

That eastern letter, which was written to cast disrepute on the character of Gen'l Harrison, brought forth the opposite results.

Lane, Kan.-as.

The Frolics of Fashion.

But fashion knows nothing of beauty, cares nothing for beauty. Fashion, as people say, now-a-days, "goes in" for novelty. Not to accept anything new for beautiful, stamps you as an outside barbarian. The fashionable modiste absolutely prefers a block—a human block, be it underwear—for which nature has done nothing. "Elle manquait absolument de tout," said a famous Parisian dressmaker of one of the most illustrious of her clients under the late imperial regime. The lady who was thus absolutely without what every woman if supposed to have, was considered to be the best dressed woman in Paris—if the empress herself be excepted—owes nothing to nature and everything to the modiste. Fashion sets aside in the most summary manner, all attempts of nature to interfere with, hinder or baffle her. It takes no account of native beauties, native defects. It is no respecter of persons; that, at least must be said in its favor.

Clara has rather a long neck, Claribel a very short one. What does fashion care about that? Deep collars or broad ties are all the go, and poor Claribel's head seems to start directly from her shoulders. She looks absurd; but all her friends would tell her she looked still more so if she were out of the fashion. Long bodies and short skirts suddenly come in, and woe to the women whose lodges are longer than their members. They must exaggerate a natural defect in deference to the omnipotent edicts of fashion. Skirts all at once expand in every direction, and become as long as they are broad. Ladies who never step from their carriage save into a house or a shop, carry a couple of yards of silky tail behind them. Under the circumstances, it does not much matter, and occasionally it may look rather graceful than otherwise. But, forthwith, the ladies who must walk because they cannot afford to be always driving, imitate their carriage friends, and the pavement is swept by the skirt of the period. If it were only swept clean, that would be some consolation; though to think of all the dust and nameless dirt accumulated by those fair creatures in a morning's walk! But, while half of it adheres to their petticoats, the other half is whisked into the air for those who follow in their footsteps.

Why cannot individual women make a stand, once for all, and say, each in turn, "I have found out what suits me. I am tall, or short, or middle-sized, slim, stout, or dumpy. This new fashion of yours makes me look like a fright. I have studied the matter now for some little time, and I have hit off to a hair the style of dress which most becomes me, which sets me off to the best advantage, which does me most justice, and all the modistes in the world shall not persuade me to make a guy of myself." Just look at the advantage of such a course. Three gloriously good things would at once flow from it. We should have beauty, variety and economy. For fitness is always more or less beautiful, and unfitness can never be even partially beautiful. Really pretty women are many, and really uncomely women are few. The former would be yet more numerous, and the latter yet rarer, if fitness instead of fashion were their habitual study. Women are willing to recognize that there are certain colors which everybody cannot wear. One girl cannot don yellow, another must eschew green, a third must beware of purple. Is color, then, a relative matter, and is form an absolute one? Most women look, perhaps, equally well in three or four different colors, and it is possible, though not probable, that three or four different styles of costume will equally become them. Here, surely, is choice enough. Depend upon it, however, some women never do themselves justice save by adhering to one fixed style and even fixed color. Why, then, try dangerous experiments? The modiste may be delighted, and female friends, enamored of novelty and too kind, may all extol the dazzling invention; but they all know full well that, if a woman is to be looked at as a woman, and not a clothes-horse, the old garb was comelier and most becoming. By strict fidelity to the rule we are insisting on, ugly costumes are banished from sight, and every woman might walk the world, feeling that she was obeying the dictum of Ben Johnson: "It was for beauty that the world was made."

The made advantage that would accrue is variety. It is often urged in palliation of the

shifting moods of fashion, that man hates monotony, that we grow tired of the most beautiful objects if they never change. Supposing such to be the case, here is the cure. We may well all wax weary of a particular fashion in dress, if it is not beautiful to begin with, and yet everybody ends by adopting it. But, certainly, is monotony with a vengeance. That, if each woman would dress according to her fashion, and not according to the fashion, we should always have hundreds of different styles all prevailing at the same time. Beauty and variety, with fixedness, would subsist side by side.—Temple Bar.

Pastry.

C. H. King gives the following experience of twenty-five years in the Housekeeper:

Mrs. Glass prefaces her receipts for cooking here, with the remark, first catch the hare. I would say, first procure good butter and flour, then please follow these instructions:

First, take three quarters of a pound of butter, free it from salt and buttermilk, (by washing it in water), then form it into a square lump and place it by in some flour for half an hour, to harden. Then place one pound of flour in your bowl. Take about two ounces of the butter, and rub it "fine" into the flour. Next wet the flour into dough with cold water, making it as near as possible the same consistency as the butter, then the two will roll out evenly together. Now place the dough on the pastry board—dust it under and over with flour, and roll it out in a piece, say twelve inches long and six inches wide; then well flour your butter and roll that out in a sheet about eight inches long and five wide. This will cover the dough about three-fourths, leaving one-fourth without butter, also half an inch round the sides and the top edge, without butter. Place the sheet of butter on the dough, as described. Next take half a teaspoonful of cream of tartar; mix it with twice its bulk of flour, and sprinkle it evenly on the butter. Now fold the one-fourth of dough, not covered with butter, over on the butter. Then fold the other part with the butter on it, over on that; then you will have three layers of dough and two of butter.

Now, roll it out to its original size, dust it with flour, fold it as before, then roll out again. Dust with flour, and fold again; repeat this twice more, thus giving it four rollings and foldings. When rolled out the last time, cut it through in two even pieces and place one on the other. It is now ready to roll any desired thickness you choose.

Notes.—In warm weather it is necessary to place it in a cool place every second rolling—in very warm weather at each rolling, and sometimes on ice.

A good, firm, tough butter is best for the purpose. Be careful not to use carbonate of soda or saleratus instead of cream of tartar.

Cut your tartlets with as sharp a cutter as possible, and with a rapid, downward motion, so that it may cut through quick, not drag through as by dragging through it presses the layers together and prevents their opening fully when baking, thus preventing your tartlets from rising fully.

After they are cut, place them on the pans, or in the patty pans upside down. The reason for this is the cutter or knife in dividing or cutting the paste, presses the layers downward towards the board, and closes them; and if placed in the oven right side up, the edges being somewhat pressed together, cannot open fully, consequently cannot rise fully, but if turned upside down they are reversed, and the edge has chance to open.

In washing or eggging pastry, be careful not to allow the eggs, milk, or what you are using, to run down over the edges, or as it sets by the heat of the oven. It binds the edges and prevents them from opening fully.

In rolling use the rolling-pin as lightly as possible, also with as even a pressure as possible. Your layers will be even or uneven, just in proportion as you roll even or uneven. Avoid breaking the dough, as the butter will force itself through, and thus destroy the evenness of your layers.

If you should break the dough, cover it over with a piece of "plain dough," dust it well with flour and continue the rolling. It is well to keep a piece of plain dough in reserve for this purpose.

If you follow these instructions and pay attention to the notes, I think you will succeed to your entire satisfaction.

Handsome Flowering Shrubs.

Among our earliest shrubs to blossom are Daphne Mezereum, a little European whose branches in March and April are clothed with purple blossoms to be succeeded, by midsummer, with brilliant berries. Then come the Cornelian Cherry—Cornus Mas—western Buffalo Berry, Leather-wood, and Spice-bush, in the order named; and all have small yellowish flowers that appear before the leaves. Though their blossoms are not very ornamental, they are interesting on account of their earliness. Contemporaneous with the above are the little shrubby Yellow Root of the Alleghenies, with its compound panicles of blackish-purple flowers; and the showy Forsythias, of which F. suspensa is the earliest, tallest-flowered, and most useful for covering, trellises or porches, or other vine-applicable purposes, and F. viridissima for hedges or single bushes. About a week later, Magnolia purpurea displays its many large, whitish-purple flowers before a leaf-bud bursts. Rhododendron Daluricum, with rose-purple blossoms expands in early April to May, and is accompanied by Andromeda floribunda, an Allegheny evergreen that sets a profusion of flowerbuds in fall and opens them in spring; and Cassandra calyculata, the Leather-

leaf of our northern states. Spiraea Thunbergii dons its snowy cloak as April makes its exit, and at the same time the Japanese Quince, Cydonia Japonica, displays its wealth of scarlet red.

Towards the end of April the yellow-flowering Currant has revealed its little clusters, and—where hardy—the crimson flowered, and—quite an ornamental species—is of equal season. About the close of April and in early May the naked branchlets of the American Red-bud are covered with little peach-colored blossoms, as are likewise those of the more showy European species. Then appear the Lilacs, white and purple, Persian and common, and which are as much at home in the city as in the country gardens; and surely it is a very poor garden indeed that cannot boast of a Lilac bush. Then comes the grand rush; our gardens are a-buzz; the air is perfumed; our garb is profuse in blossoms; Double-flowering Almonds have their twiggy branches thickly studded with "daisies." Exochorda grandiflora, one of the handsomest of the Spiraea family, is clothed in white; early flowering Azaleas, varieties, and hybrids of the deciduous species are in blossom. English Hawthorns, single and double, white and red, diffuse their welcome fragrance; the Chinese Wistarias drape our walls, arbors, or old tree stumps with drooping clusters of blue or white.

To dress consistently with the vocation is an unmistakable evidence of good common sense, the kind most needed.

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In answering an advertisement found in these columns, our readers will confer on us a favor by stating that they saw the advertisement in the Kansas Farmer.

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We have for sale a section of land, seven miles from Kinsley, Kansas, one mile from E. Depot near Nettleton, which is improved by an elegant two story house with stone basement, with piazzas on three sides, a fine barn 80x40 feet, two wells and wind mills, tight board corral, with ample free range and running water. This place is in all respects very desirable for cattle or sheep. 400 head of cattle were held on the place last season, wintering well without other feed than Buffalo grass. This property is offered for \$5,000 and is a bargain for any one proposing to go into the stock business, with either sheep or cattle. Address Proprietor of

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To contract for 600 Ewes, two years old, seven eighth Merinos, to be delivered at Kinsley, Edwards county, Kansas, between September 15th and October 1st, 1880. JAMES HOLLINGSWORTH, 210, LaSalle street, Chicago, Ill.

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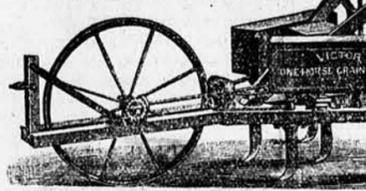
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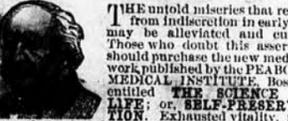
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From A. McKeever, Valley Falls, Kansas, about six months ago, one bright Sorrel Horse, about 15 1/2 hands high, large star in face, dark spot or ink on right hip, collar marks, good style. A liberal reward for recovery or information leading to.

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Farm Letters.

SMOXY HILL, McPherson Co., April 25.—This is what tries a man's soul, having had no rain for six months, and seeing the fall wheat heading out when only four inches high.

We usually, here, have plenty of grass for stock this time of the year, but at present writing there is not enough grass for one head of stock now where ten head had plenty last year.

We have had considerable sickness here this spring, but among the most prominent is the "blues," especially among the farmers.

The city of Lindsburg is improving very fast. Several substantial houses are being built, and a large number of shade trees, especially soft maple, have been planted this spring.

BUTTERFLY, Kingman Co., May 4.—Farmers are somewhat encouraged by the late rain. Corn that is up looks well and seems to be growing.

Farmers generally seem to think that stock raising is more profitable than farming. They have got the sheep fever badly in this locality.

The railroad is drawing the attention of the farmers at present. The engineers are in this locality at work locating a route from Wichita to Kingman.

Roy, Sumner Co., May 3.—I have waited in vain for a boom in the prospects of the farmers in this community to report to the readers of the KANSAS FARMER, but everything is dry and still drying.

From practice I find wheat is doing best where ground was plowed the deepest and earliest, and then rolled early in the spring, and there seems to be no difference in that which was drilled and sowed broadcast.

I have also learned, from sad experience, that it will not do to put wheat on millet ground, as the ground will not retain the moisture and growing properties enough to produce two heavy crops in fourteen months.

In my estimation, those who leave the country this summer are going to miss it. It may be dry the rest of this season.

Cattle and hogs are doing well. Twenty-seven carloads of fat stock started to Chicago a few days ago, and more are ready to follow as soon as cars can be procured.

There is a great demand made for the seed of Rice corn in this part of Kansas, as many are going to plant it. I see Mr. Dickinson writes an article for the FARMER about this plant, in which he gives it considerable praise.

There is another subject that I would like to see discussed in the FARMER, and that is the two hundred dollar exemption law. For what purpose could any one have in framing a law of this nature?

NORTH CEDAR, (22 miles north of Topeka), April 28th.—On Sunday, the 18th inst., the wind blew a tremendous steady gale from the southwest, with clouds of dust, that did almost obscure the sun.

On the 23d inst. I visited the old orchard of A. Dodson, of North Cedar, and I never saw a better prospect for peaches and apples.

orchard, in the distance, looked like a snow-bank. His eight hundred bearing apple trees were all full of bloom, except the Fameuses which were little short.

Our fall orchards this year will put the price of apples low enough. All can have their wants supplied especially in summer and fall varieties, which will call for the American Fruit Dryer, of which we see mention made in the FARMER.

I am highly pleased with the information on Rice corn given by Mrs. A. B. Prescott, in your last issue. Would send stamps for seed if she will give her address through the FARMER.

I concur with Mr. H. C. St. Clair, of Bell Plain, and L. H. Gest, of Valley Falls, in urging farmers to keep a systematic run of their business.

And now to you that write to our farm paper, the KANSAS FARMER, do not forget to give date, address, distance and direction from Topeka.

BELLE PLAINE, Sumner Co., May 3.—It is said, in Holy Writ, that the rain shall fall on the just and the unjust, but up to the present time a large portion of our country has not had rain to amount to much.

Many of our farmers have sown large fields of timothy and clover, but we fear a failure this year.

Our corn has been cut down three times by the frost, which was very severe on the morning of the 26th and 29th.

The farmers are patiently waiting for the price of lumber to go down so that they can build and fence.

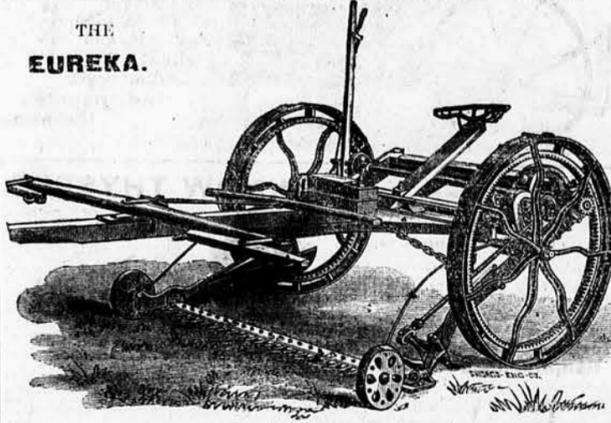
From present appearances we will have rain before long, yet our farmers are in good spirits, and are going to fight it out behind the plow if it takes till Christmas.

H. C. ST. CLAIR.

KIDNEY-WORT THE ONLY MEDICINE That Acts at the Same Time on THE LIVER, THE BOWELS, and the KIDNEYS.

MOSELEY, BELL & CO., KANSAS CITY, MO. FARM MACHINERY FORWARDING AGENTS AND SEEDSMEN.

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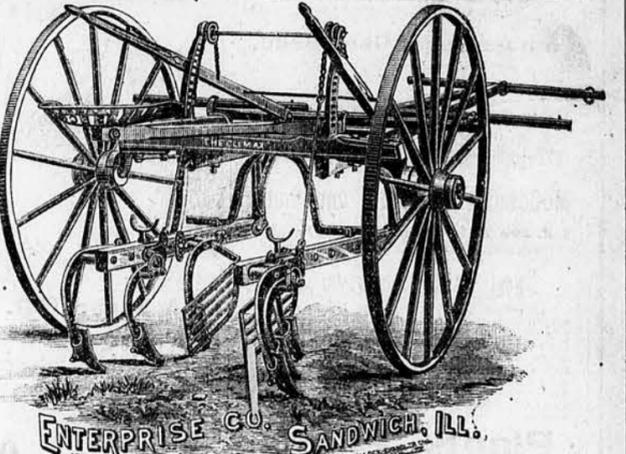


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