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Agriculture.

SOUTHERN CALIFORNIA.

BEEES AND SHEEP.

EDITOR FARMER: Last year was an extraordinary year for honey in Southern California, and the consequence was, that many of our bee men got the California fever, in fact, I cannot say that I was entirely free from it myself, but circumstances prevented me from going.

I have just received a letter from one of our prominent Kansas bee-keepers, that went there last spring, and I will take the liberty to make a few extracts from it. There is no doubt that everything he says is strictly true, notwithstanding it may appear that he is somewhat homesick. He says:

"Though I have been here only three or four weeks, I will give my impressions. Of all the God-forsaken, dreary, desolate, utterly useless, desert country you ever saw, this is the worst. Sailing as I did down the coast, we rarely left sight of land from San Francisco here, the whole way the country was barren of trees, and the whole face of the country looked dead and destitute all the time. San Diego is a small town, from which half the people who settled here a half dozen years ago, thinking they would make their fortunes by owning town lots at the terminus of a great railroad, have left for America, and as a consequence, one-half of the houses and stores are vacant, rents down to nothing. The town is dead as to business, and a general air of get away and live if you can, if not stay and starve in the town. They have a daily line of two horse stages from here up the coast to Los Angeles 120 miles, and a line of steamers from San Francisco, arriving once in about five or six days. The town is supported mainly by invalids, who came here for their health, and if they don't die of ennui, they are well enough to live elsewhere.

About every third man you meet and talk with, curses the country, and wishes he had been anything but a fool to come here and invest money.

There is no green thing here, except in small gardens, where they have wells and wind-mills to throw on plenty of water. They can't raise a thing here farming, for they have tried it and been ruined by the dozen and hundred. This whole country is worthless for anything except sheep and bees. The sheep men have now practical possession of all the grazing lands. I saw thousands of sheep herded on land as bare as a road. They claim great profit in the sheep business, and I presume they do well if they only have the range.

Still wool is only 12 to 17 cents, so I don't see any great money in it. The face of the country, from 15 to 20 miles from the coast, is rolling and covered with cactus and bushes, none of which are more than six to eight feet high, but mostly about two feet. The soil is a sandy gravel, mixed with clay, overrun with swifts, horned-toads, snakes, ground squirrels, gophers, rabbits and quails. Thousands of acres are perfectly honey-combed with gopher and squirrel holes, giving a homesick and desolate look perfectly unendurable to one who has been in Kansas. The climate is all they have, and that is the same day after day, warm, cold, warm, hot, but you want to wear winter clothes.

A day or two after my arrival, I took a horse and rode out to Bernardo and beyond some forty miles, and visited a large number of bee-ranches. The bee men have squatted all over the goat land where they thought they could get good ranges for their bees, living in small frame houses, and mostly without women—"batching it." Bees did so extraordinarily well here last season, that they created a perfect furor, so that all the citizens here in town, who had any money to invest, went out into the mountains and hunted up a claim, and buying at 15 or 20 dollars a hive all the bees they could. Some few attended their bees and some let on shares, giving one-half the honey and one-half the increase, and fur-

nishing one-half the hives and surplus boxes, others live near to take care of them.

Last winter was dry, but the bees started out nicely to swarm the latter part of March, but the 1st of April, they had a heavy frost, which cut all the flowers, and put an end to swarming; since then many a fine new swarm has starved to death, and it is only since the 15th of this month (May), that they made enough to live on. Now they are doing only fairly, and they say they will not get one-half a crop of honey. Many are discouraged, particularly the new ones, and those who went into the business green, as might be expected. This fall, say October, you can buy an apiary in box hives for less than \$3.00 each. I had fifty stands offered to me in Harbison's hives at \$5.00 each; dozens of ranches, and bees will be for sale cheap by discouraged bee-keepers.

I have been to Harbison's two or three times, and at one of his six or eight apiaries, where he had 400 stands of Italians, he lost over 3000 hives last spring, and feels much discouraged with this year's work. I saw the man who wrote the article in the A. B. J.; all the men he mentioned are mad for his making the statements he did, saying he only told one side of the story. It is very costly getting started here, one must have at least \$2000 in gold after he gets here. They will not look at an extractor here; extracted honey from 3 to 5 cents, and nice comb honey, 12 to 16 cts. Harbison says his Italian bees averaged for the last five years, as follows: In 1870, 30 lbs.; 1871, 70 lbs.; 1872, 90 lbs.; 1873, 60 lbs.; 1874, 150 lbs.

I would not advise you to come here; go to Texas, or anywhere else, rather than come here. Vegetables for family use are raised by a very few who have good wells to irrigate all the time. Not one bee-keeper in twenty has or can get water enough to raise what he can eat. They have tried fruit of all kinds, and yet I am told none succeed. Chickens seem to be rather plenty, but they are 75 cents each, and die off by the dozen in the summer. No one raises any hogs, they would eat their heads off with barley at 3 cts. per pound. Potatoes are from 4 to 4½ per pound. Butter, 37½ cts.; but nearly all they use comes from San Francisco.

This country, like a blank corner of a checker board, is as near a desert as it can be and miss. If not that sheep and bees do well here, it would be utterly depopulated in two years. Two steam mills are here, and make little else but bee-hives and material for honey boxes. You can have the material all cut ready to nail for Harbison's hives for \$1.80. Long-stroth's for \$2.25, and your style, which Bowman gets them to make, for the same. Their idea here is to get as much room for surplus honey as possible. They put on as many as eight sixteen pound boxes at once. Nearly every one now has enough empty hives for next year's swarms. Some provide themselves with three new hives for each old one, and as not more than one hive in five has swarmed this year, they have the balance to carry over to next season, and the expense in a large apiary is heavy, there is lots of dead capital. One can get all the bees he wants on shares. Dozens of men are at work for their board at the ranches, mostly invalids. N. CAMERON.

MORE CAPITAL TO THE ACRE.

It has been said, with apparently great show of truthfulness, that nothing is so truly profitable or so grateful as the soil; yet few trades or occupations are so unremunerative as its cultivation. That this statement is in part true there can be but little question. That there is a reason for it, must be equally as obvious. It is an acknowledged fact that we are dependent upon the soil for meat, drink and clothing; and their preparation, transportation and distribution furnish employment to the great bulk of the non-agricultural classes. Looking at the proposition in this light, how is it that the occupation of the farmer seems to be generally regarded as an unprofitable one? There must be bad management somewhere, and it may be briefly expressed in the words: the expenses exceed the income. This may be caused in the first place by attempting the raising of crops not adapted to the soil and locality, and by acting upon the supposition that because one man has been exceptionally successful in the production of a crop, all others under other circumstances will also succeed.

What crops are best adapted to certain soils and what can be produced with the most profit, are questions of the most difficult kind the practical farmer is called upon to answer.

Results are often diverse, even when conditions seem similar.

Much of the success of English husbandry depends upon the application of this rule of adaptation of crops and stock to localities. The Short-horns are found in the rich grass-growing districts, the Devons in another, the Herefords, Ayrshires, and Jerseys each in their own; and by this system of breeding for locality, and by careful selection, there has been a constant improvement in every variety. The application of the same rule by English husbandmen in cultivating crops and applying measures, has led to an increasing yield; while with us, from failure to study and apply this principle of adaption, in too many cases the best breeds have actually deteriorated; and from the same cause the yield per acre is growing gradually less instead of increasing.

Important as it is to observe the foregoing principles, it is equally so to cease devoting so much capital to the increase of the number of acres, and instead of applying all our capital in that direction, it should be devoted to deepening and improving the productive capacity of what we already possess. A deep rich soil is what we want, instead of a superficial one. In the preparation of a deep soil, we do not mean the adoption of the usual system of burying the rich surface soil to an unusual depth, but to leave it on the surface and use the subsoil plow to loosen the compact clay soil beneath it, so that the roots of the growing plants can penetrate it and assimilate the elements of plant food that otherwise would remain unavailable. A proper system of culture, manuring and rotation, and the growing of clover and grasses, requires an outlay that few think they can afford. A pertinent question, and one that ought to be discussed in the ranges and clubs, is this: How much capital should be employed in the improvement of each acre of tillable land?—*Rural World*.

CLEAN CULTURE.

Every farmer knows the importance of clean cultivation, where the growth of weeds interferes directly with the yield of crops; yet many farmers, who as a rule secure good crops at considerable expense, allow weeds of all kinds to trespass upon ground used, as turning rows, fence corners, etc., which scatter their seeds in every direction, requiring the farmer each year to expend additional labor above what otherwise would be required to hold his own with them.

As the land grows older the danger of this increases, unless great care is exercised in keeping up the fertility of the soil, and in destroying weeds in whatever quarter they may present themselves. Along hedges large enough to be beyond the use of cultivation, and other fences too, a strip wide enough for a turning row should be devoted to grass. In this way the dirt in plowing, may be thrown from the fence as often as in the opposite direction without difficulty, and not only adds wonderfully to the convenience, but to the artistic appearance of the fields.

All these unsightly patches, so often seen about a farm, doing so much damage, and bringing nothing in return, may be occupied in some way to advantage without much labor. A grove may be planted, a few shrubs and flowers, or some of the small fruits may be cultivated to advantage. If time will not admit of these things, scatter upon the surface plenty of grass seed and it will take care of itself.

Some weeds are so prolific in their seed-bearing capacity that the ground becomes full of the little germs which remain hidden in the earth for years, to spring up and choke the growing crops, whenever the conditions are favorable. To prevent this farmers should not even allow such to grow along the roadside.

Early and thorough cultivation of the corn crop, thick seeding of small grain, early fall plowing before the weed seeds mature, are all valuable aids to clean cultivation.—*Western Rural*.

A New Jersey gardener considers salt necessary to the development of cabbage, especially in places far from the coast. He finds them more crisp, of better flavor, and to keep better when salt is used than without. He used it as follows: "A few days after setting out the plants, and when they are damp, either after a rain or when the dew is on, I take a small dish of fine salt and walking among the rows sprinkle a little pinch of salt on the centre of each plant when the leaves begin to grow. I repeat the salting, and when the centre of the leaves begin to form the head, I apply salt again, scattering it over the leaves; after this I look them over occasionally, and if I find plants that do not head well and appear diseased, I sprinkle the salt over freely; this will save all such plants. A quart of salt is sufficient for five hundred plants in a season, although more can be used with safety."

THE SULLIVANT FARM.—Recently M. L. Sullivan, the owner of the great farm in Ford Co., Ill., felt the need of money and borrowed it, from which the report arose that he had been compelled to sell his farm. It is explained that he met with losses last year from poor crops which, he says, the present year promises to more than make up. He has 18,000 acres of corn now growing, with a good proportion of other crops, and last Spring had 240 plows at work.—*Western Rural*.

Horticulture.

WHAT KILLED THE PEACH TREES.

[The following communication from an esteemed correspondent was sent to this office June 24, and should have appeared on that date. Will C. W. J. accept an apology for the delay?—ED. FARMER.]

I observe in Northern Kansas that there is seemingly great capriciousness in the way the peach trees have been killed. My attention has been called to the fact that seedlings have apparently suffered more than budded fruit, and it has been urged as a refutation of the common belief that seedlings are more hardy than budded fruits.

I have examined the matter with considerable care and observe the following facts, applicable to orchards observed in Atchison, Doniphan, Brown and Nemaha counties: Peach trees closely planted, unpruned, unwatered and in land plowed last summer have suffered worst, the older trees showing the most destruction.

These are mostly seedlings drilled in rows along fences or in compact patches, frequently protected by cottonwood trees planted about them.

I observe that the trees suffering least are young (two and three years old) and planted in front yards, lawns and gardens, of which the owners have taken some care, thinning out twigs and removing borers. These being the pets of the family, I find them to be choice buds, or seedlings planted from pits of choice specimens of exhibition fruit.

Between these extremes there are all possible shades of variation, from trees totally killed to trees not apparently hurt.

Now, while confessing that the observations have not been sufficiently ample for generalization, I reach the following conclusions:

- 1st. That the low temperature of the winter of 1874-5, which reached 24° to 26° below zero in this part of the State, was not of itself sufficient cause to kill all the peach trees.
- 2nd. That the drought and locusts of the summer of 1874 were not alone sufficient causes for the total destruction of the peach trees.
- 3d. That the combined and concurring influence of all of them, when operating in full force, was a sufficient cause for the destruction of the peach.
- 4th. That the predisposing cause which enabled the winter to kill a large part of the peach trees of Kansas was anything which weakened the tree, during the season of 1874, prominent among which causes was too much peach wood to the square rod, defoliation by grasshoppers, borers, plowing in the fall or in dry summer, close contiguity of more vigorous species, such as cottonwood and osage orange.

With respect to plowing and plowed fields, I was at considerable loss for an explanation, though I conjecture this to be substantially the true explanation.

Trees standing in turf or in earth well compacted did not receive that free watering of the roots by the September rains, which fell while it was yet warm enough to start growth, while trees standing where a pulverized soil admitted of a large retention of water were kept unripened and hence tender. Finally, while it is probable that artificial selection, practiced by men to secure the earliest or latest, or sweetest, or most prolific species is not coincident with that selection of nature by which the "survival of the fittest" is secured, it will make budded fruits in the aggregate somewhat more tender than the aggregate of seedlings. I am satisfied that this varietal difference is of far less importance in determining the ability of the species to endure the climate than the special accidents and surroundings, such as indicated.

While these observations were made with especial reference to the peach tree, there can be no sort of doubt that the principle is applicable to other trees.

It would be a melancholy tale to hear full reports of the destruction of trees occurring during the last twelve months, and by the time the fungi and insects, those scavengers of God for the removal of decaying tissue, get through with our weakened survivors, we are not apt to be greatly assured as to the results of fruit-growing in that "natural home of the apple and the pear"—the plains.

As we will doubtless have a wet June and July, with a high relative average humidity,

we may expect when the blight comes in with it to remove the enfeebled consumptives from our orchards, that learned members of the State Horticultural Society will find further evidence that the cause of blight is the extreme humidity of our climate. C. W. J.

TO TRANSPLANT GREEN RASPBERRY PLANTS.

Raspberry plants of this spring's growth can be transplanted in May and June, when they are from six to ten inches high, as safely as tomato plants; and will make, generally, a much better growth for next year's fruiting than the year-old plants set earlier in spring. We have tried it repeatedly with Antwerp, Herstine, Highland Hardy, &c., with most perfect success. Indeed except Black Caps, we resort to this plan of planting altogether. We last spring sent plants hundreds of miles in good order, packed in moss, with roots previously muddled, sending at the same time the offer to refund the money to all who did not succeed with them. Every instance was a success last year.

Fruit growers and gardeners may save a year's time by this method, for, with care, as good a growth of wood will be made this year as is usual the second year from the old plan of planting the year old canes.

Just take a pail or close vessel to hold plants while digging, and keep roots from the air, dig with a fork so as to save a large part of the cross root, then mud the roots well, and transplant in the evening or on a cloudy day. A long dry spell may injure, but they are generally as safe as tomato plants.—*T. H. Burgess, in Vermont Farmer*.

IMPROVING PLANTS BY PINCHING AND PRUNING.

"How shall I grow my plants compact and symmetrical in form?" is a question frequently asked by amateur florists. It is a simple matter, and is accomplished by judicious pruning and cutting. In nearly all kinds of flowering plants excepting those grown from bulbs, also in trees and shrubs, buds are formed at the axis of the leaves along the stem or branches while the growth proceeds from its termination. This, in perennials, if not checked, continues to grow, and usually causes a tall or unshapely form, but by cutting off at any point, or pinching out the terminal buds, new shoots start out at the leaf-joints below the cut, or if already started, commence to grow with increased vigor, and will, in due time, result in a better-shaped or more bushy plant or branch.

Pruning or pinching should be more generally resorted to than it is, for, by observing the principle of growth just alluded to, and varying the pruning to the habit of the kind it is just as easy to have your plants, either in the house, conservatory or garden, of fine form, as to have them otherwise, and they are so much more rewarding and agreeable to work among. Little danger exists of cutting away too much; persons who resort to pruning frequently err in cutting too little. Old plants with long, leafless branches may be entirely re-shaped by severe pruning.—*The Home Florist*.

STORY OF THE BIG SQUASH.

The big squash of Amherst Agricultural College Farm, which grew so stoutly that it burst several iron cages, and finally lifted 4,130 pounds (and of which a plaster cast is preserved), had enough roots underground to feed it for its herculean work. The squash vine was washed out with its roots by the continued use of a garden hose for twenty-four hours, and the whole root system was spread out on a floor and carefully measured. The main branch was twelve or fifteen feet long, and aggregated some 4,000. One of the seventy nodal roots, four feet long, had 480 branches, and a most careful estimate of the ramifications of the rootlet based upon the actual measurement of the division, showed that the squash vine had from fifteen and nineteen miles of root. Reckoning the number of days it had been growing (53), it was found that it must have been on an average one thousand feet per day, and on favorable days about two thousand feet. Colonel Clark, the President of the Agricultural College, says that while this growth was going on and the big squash was expanding and lifting its enormous burden, great drops of sweat stood all over its rough rind, proving that it felt the great task imposed upon it.

THE EUCALYPTUS.—Garibaldi is occupied, among other schemes, in planting the famous *Eucalyptus globulus* (Australian gum-tree) around Rome, with a view to prevent malaria. Travelers in the south of Europe have now an opportunity of admiring noble specimens of this tree in the promenades and public gardens of Nice, Cannes, Hyeres and Algiers: while in Spain its health giving properties are well known and appreciated. In 1860 the eucalyptus was first introduced into Spain on account of its hygienic virtues, and these were so soon discovered by the poor people of Valencia that they used to steal the leaves for the purpose of making decoctions. The Cape of Good Hope, Corsica, Sicily, California and Cuba have also their plantations. The eucalyptus, in fact is making the tour of the world. Already efforts are being made to introduce the tree into Ceylon as an antidote to jungle fever. Unfortunately, it is too delicate to stand English springs.—*Pall Mall Gazette*.

Farm Stock.

THE BROOD MARE.

The best feed for the brood mare, says a writer in the New York Herald, is corn stalks, or good timothy hay, with four quarts of ground oats and wheat bran, equal parts each day. The ground oats and bran not only enables the dam to make all necessary preparation to supply the coming foal with nourishment at the time when most needed, but it keeps her healthy and strong, and enables her to furnish the growing fetus with the very best kind of material to make the best bone and muscle. The dam should have moderate exercise, but it should be regular. If she is used in a team she should not be driven faster than a walk nor loaded too heavy, for, in either case, there is danger of injuring the dam and ruining the foal. She should be housed or sheltered nights and in all stormy weather. As foaling time approaches she particularly needs the practiced eye of the careful and experienced breeder. She should be watched both day and night, as many a valuable colt has been lost that two minutes' labor at the particular time would have saved. As soon as the colt is dropped the attendant should see that its head is free from the membrane or sack with which it is enveloped, as the colt will otherwise soon smother or drown. The next thing is to sever the umbilical cord, about five inches from the foal, and tie the end next to the young colt with a string, to prevent bleeding; this, if possible, should be done before the dam rises, as many a foal has been ruptured at the navel by the dam rising before the string was severed. After the above been promptly attended to, leave the dam alone with the foal for half an hour. If, at the end of that time, through weakness or any other cause, the young foal has been unable to secure its natural nourishment from its dam, the attendant with which the dam is most familiar should lose no time in rendering the necessary assistance by holding the colt at the side and by putting the nose to the teats of the dam. After the colt is able to draw its nourishment from the dam without the aid of the attendant, little need be done but furnish a shed, if the weather is inclement, and a liberal supply of hay or stalks and a few quarts of ground oats and bran per day until there is a full bite of green spring grass.

THE DAIRY COW.

The first quality to be estimated in a cow is docility of temper; second, her constitution to stand the severity of our climate; third, her fluent milking qualities, and ease and convenience in obtaining her milk. Efficiency is a universal characteristic of the milking races, as distinguished from the opposite sex. Therefore, if a cow has a masculine countenance, with heavy skull, horns, neck and forearm, I consider that if she was cut out for a deep milker she was spoiled in making up.

A full bright eye indicates vital stamina; light skull and horns, thin neck, fine shoulders and forearm, good vital development, wide across the hips and back adjoining, thin in the flank and lower muscles of the hind-quarters, flat bone, with loose mellow skin, and well marked escutcheon (according to Guenon's theory), with large arterial circulation are indications of deep milking qualities. If the skin is stiff and leathery she will milk hard, be slow in thrift and liable to cracked teats. If the udder is low and sagging it will be liable to get dirty and chafe by touching. If the teats are set close together, inconvenience will be experienced in milking. Long in the body and leggy, with large bony structure, indicates physical weakness and hard keeping qualities.—*Utica Herald.*

SHEEP ON THE FARM.

Sheep are undervalued by the mass of land-holders as a means of keeping up the fertility of the soil and putting money into the pockets of the farmers. The moment one begins to talk of sheep husbandry, the listener or reader begins to look for wool quotations, as if the wool was all that yields profit from sheep. One might as well look for wheat quotations alone when there is talk about the profits of farming.

Sheep on a farm yield both wool and mutton. They multiply with great rapidity. They are the best of farm scavengers, "cleaning a field" as no other class of animals will. They give back to the farm more in proportion to what they take from it than any other animal, and distribute in better with a view to the future fertility of the soil. Prove this? There is no need of proof to those who have kept sheep, and know their habits and profits they yield. To prove it to those who have not the experience, it is necessary they should try the experiment or accept the testimony of an experienced shepherd.—*N. Y. World.*

THE CROAKER.

Judge Luse in the Iowa Fine Stock Gazette, says:

We also have a class of men known by the name of croakers who oppose all improvements of whatever kind—are always proclaiming—that we are all on the eve of bankruptcy, caused by making improvements, that the country is becoming overstocked with fine horses, thoroughbred cattle, sheep, hogs, etc., and that some persons are going to lose on their investment, and be forever ruined. This class appears to have selected croaking as a business, and stick to it. Their arguments are about as sound as those made use of by the farmers and teamsters in Pennsylvania at the time the first railroad was projected through their part of the State—who said the "railroad would ruin their business as teamsters and horse breeders." We have no fears, whatever, that any of Mr. Croaker's predictions will come to pass, yet we are sorry that so many of our farmers are still prejudiced against using thoroughbred bulls instead of scrubs, thereby losing about 50 per cent. on every animal raised, and we conceive this to be the only sensible starting point for our farmers, first improve their common stock and if they then find they are adapted for the business of breeding thoroughbred stock go into it, and with the experience they have in raising grades may succeed. The wealth of the country is made up of the wealth of individuals, and when an individual uses his means for the purpose of improving the country or for improving the property of the country, he is adding just that much to the general wealth. It matters not whether he improves a quarter section of land, or brings a good horse or a thoroughbred bull into his neighborhood, the effect is the same.

In the great West and especially in our own State, all branches of agriculture should be carefully pursued, and none of them neglected; we have the land, the climate, and every other advantage that we could reasonably expect, and then why get excited and abandon any business that has always been reasonably remunerative when we used reasonable energy and economy.

The Dairy.

BUTTER MAKING IN SUMMER OR WINTER.

When a large majority of persons engaged in any business follow a certain plan, it is fair to assume that this plan is the best one under all the circumstances. A large majority of the farmers of the northwest have their cows calve in the spring and make butter up to mid-winter. The presumption is that this is the best way, but there are certainly strong arguments against this plan. We refer only to the case of the "average farmer," who does not make dairying a leading pursuit, who has not the best of conveniences for keeping butter, and who finds it most convenient to sell it about as fast as it is made.

The plan in question gives the largest product at the time when butter is lowest, requires the milking of the cows and care of the butter and milk, during the busiest and hottest time of the year, when flies are most troublesome, and the cows most uncomfortable. Yet it also requires milking through at least half the winter, with a small product.

It seems to us that better results would follow having the cows calve in early fall, in September for instance. This would give a good flow of milk during much of the time when butter commands the highest price. The cows, of course, would require good food and care—but they require some attention in any event, and under the common plan they are giving a little milk during part of the winter. With comfortable quarters and good food, the yield of butter need not fall much below that obtained from grass, while the price will be much higher. Some extra trouble is required to make good butter in winter, but this trouble is not greatly increased by increasing the quantity made. In the spring, the flow of milk can be revived when the cows are turned on grass, and then when the hot weather, the busy season of haying and small grain harvesting are coming on, and prices are so low that there is little or no profit in selling the butter, the cows can be dried off and allowed to rest during the hot season.

For those who can conveniently pack and hold the butter, this plan has fewer advantages, but for very many, the evidence, both on general principles, and from the experience of some who have tried it, is very strong that its adoption would be desirable.—*Western Farmer.*

Hygiene Matters.

FASHION IN MEDICINE.

Prof. Dongan Clark, in an address to the graduates of the Indiana Medical College, has the following apt remarks on this subject:

"Thirty years ago the lancet was used in perhaps nine cases out of every ten visited by the physician. To an equal proportion some preparation of mercury was administered. Now, I apprehend that the ratio is reversed, and that the physicians bleed and mercurialize no more than one in ten of their patients. Most of them, indeed, allow their blood-letting instruments to remain at home altogether, and grow rusty in total neglect. The human system will bear very considerable losses of blood with impunity, and I do not presume to criticize with any severity the proceedings of our immediate forefathers in the profession. Very few persons were actually bled to death by physicians, even in the days when phlebotomy was most prevalent; yet it can scarcely be otherwise than true that more harm than good resulted from this indiscriminate depletion. A patient in Philadelphia was very ill of pneumonia; he was subjected to repeated and large venesections, and after several days the physician reported that he was cured of pneumonia, but was dead of debility. Whether death of debility is easier and better than death by pneumonia, I am not prepared to say. In our day, as already intimated, the lancet has fallen into almost total disuse. It may well be questioned whether, at the present time, the reaction against blood-letting is not too strong, and whether we are not allowing our patients to suffer from the too unimportant, as they formerly suffered from the too frequent and excessive, employment of the lancet. As regards mercury, there can be no doubt that the generation of physicians immediately preceding our own employed it in excessive quantities, and sometimes to the injury of their patients. The injuries so produced have inspired the public mind with a prejudice against the drug; a prejudice so strong, indeed, that many patients now will steadfastly resist its administration even in cases where it would do them immense benefit. Mercury, like alcohol, has undoubtedly its legitimate use as well as its abuse; and every one of you has met with cases in which it could not be effectually substituted by any other drug in the pharmacopoeia. Yet of an equal number of persons who have taken calomel and lobelia respectively, a much greater proportion have perished from the latter drug than the former. If one has slain its thousands, the other has slain its tens of thousands. In hundreds of homes in Indiana lobelia is kept as a domestic remedy, and administered, without fear or scruple, out the advice of a physician, while the same mothers would dread to administer a dose of calomel, even by a physician's direction, as they would dread a serpent's bite."

NURSING THE SICK.

BY HOPE EVERMORE.

As my province is nursing a sick friend in these days, I prefer to write on that subject. It seems so grievous to see the strong arm made weak and helpless that one longs to remove all annoyances as well as to procure all the comforts which would be healthful for them. In doing this there should be no sharp or loud noises, no loud, coarse talking, no business matters transacted in the presence of a sick person which would excite or weary them. No excitement whatever should be allowed in their presence. Those who administer to their wants should learn to move quietly about, to speak in low, soothing tones, and refer everything, so far as is consistent, to their wishes. In some cases of chronic difficulties their wishes should be consulted in nearly everything. Where there is a very slender hold on life, a careless disregard of their wishes will nearly or quite snap the feeble thread asunder. How cruel to see the weak and helpless thus abused—criminal, indeed—nothing short of it. And yet one sees many such cases in life. Heaven grant that they may be fewer!

One of the most pleasing nights in a happy family is to see the weak and helpless carefully watched over and all their wants promptly supplied. No sad events or cruel practices

which may have occurred in the neighborhood should be spoken of in the presence of an invalid. Children should not be chastised, even justly, in their presence, unless they require it done. I have known persons to be much injured by this who could not bear to hear of the slightest cruelty, especially where there is trouble with heart disease.

In preparing food for chronic invalids great care should be taken to do it as the patient requests, as he may be deprived of the nourishment he is much needing by a little disappointment of this kind, which might have been prevented by thoughtfulness. Squeaking boots or shoes are inexcusable in a sick room. Standing or passing between the sick one and any object he may wish to look at is often annoying. There should be no apparent hiding of anything from him—no mystery about any thing talked of.

Sometimes kind friends through a sick room thoughtlessly until the patient is almost deprived of breath. This should be better understood than it is by many persons. "Visiting the sick" is a rather much abused practice. I have known patients to be so annoyed by visitors on the Sabbath that they really dreaded to have the day arrive, when otherwise they would have rejoiced at its coming, because the family would have no work about on that day. For it is known there are many families who have no room enough to seclude their sick entirely from all household matters. Many persons will make short, quiet calls on the sick, even though he can scarcely taste it. There are too many, especially in newly-settled regions, who have mistaken ideas of kindness to the sick, and weary them when they should only make them glad. I have known persons to be so unwise as to call on the sick late at night, just when the weary nurses had made ready for a little sleep and were in no wise prepared to receive callers or to be disturbed in any way. No person will do this after watching with the sick night after night until worn out for want of sleep. It is much better for the family to take care of their own sick, if a part can sleep early and be ready to change off with others and let them rest in the latter part of the night. In such cases it is exceedingly annoying to nurses, as well as invalids, to have callers late in the evening. Do not call on the sick at night, unless especially requested to do so.

See to it often that the air of the rooms is fresh and invigorating. If you have no chance for draft in the room through windows and doors, you may do much good by swinging violently a palm-leaf fan for fifteen minutes or more. I have learned this within the last year from necessity, and have been astonished at the result of it. Putting such pieces of bedding out of doors while as cannot be washed, and even heating them by the fire when the weather is not pleasant, is a good way to air them.

No water should be used for culinary purposes, or even for bathing, after remaining in the sick room. Great care should be taken in keeping everything cleanly, as well as removing all discharges immediately from the room. Whatever kind of sputum is used should be thoroughly cleaned at least twice each day. Much more depends upon this watchfulness than many inexperienced nurses suppose, and many persons fall sick from this and similar causes, and disease are supposed to be contagious when they are many of them—only communicated by a lack of care and cleanliness.

Make everything as bright and cheerful as about the invalid's room as possible. Decorate it with your prettiest pictures and flowers, and, if possible, bring fresh flowers every day to gladden them. Let them see and hear of only the beautiful and lovely in life, gently shielding them from all of its dark and shadowy phases.

CAN THIS BE TRUE?

The following base insinuation is floating about the state press: The New Haven train stops five minutes at Stamford for refreshments. As the Boston express drew up at the station the other afternoon, a man with a blue cotton umbrella in his hand dashed up to the refreshment counter "Look alive there!" he shouted to a waiter. "Cup coffee, ham sandwich, custard pie, two doughnuts, and a piece of sponge cake." The order was promptly filled. He put the umbrella between his legs, caught up the cup with one hand and carried devastation to the food with the other. Another cup of coffee was ordered and swallowed, together with a third doughnut, when the signal was given, and he boarded the train with a second sandwich in one hand, the umbrella in another and custard in both corners of his mouth. When he took his seat he said to another passenger, "These refreshment saloons should have oat-meat porridge and Graham bread always on hand." It was Dio Lewis.—*New Haven Journal.*

TO REMOVE FOREIGN BODIES FROM THE EYE.

A medical correspondent of the Lancet makes a suggestion which may prove useful on emergency to some of our readers. He says: "In consequence of the difficulty experienced in removing from a patient a portion of steel deeply bedded in the cornea, which did not yield to spoon or needle, some other means of removal became necessary. Dry, soft, white silk waste suggested itself to me, and was wound round a thin piece of wood, so as to completely envelop its end. This soft application was brushed once backwards and forwards horizontally over the part of the cornea where the foreign substance seemed fixed. To my astonishment it was at once entangled by the delicate but strong meshes of the silk, and was withdrawn with the greatest ease, caught by the same. A gentleman in turning steel at a lathe suddenly felt that a portion had entered his eye. He went at once to a surgeon, who with the most skillful manipulation failed to extract the same, saying it would soon work out of itself. The next morning the patient saw me, having suffered severely since the accident, and on the first application the portion of steel was extracted."

ANTIDOTE FOR ARSENIC.—In the German Pharmacopoeia an "Arsenic Antidote" is ordered. It is to be prepared thus:

Solution of persulphate of soda, 60 parts. Water, 120 parts. Mix and add Calomel magnesia, 7 parts, previously rubbed with water, 120 parts. These are to be shaken together until a soft regular mass is obtained. The solution of persulphate of iron is prepared by dissolving 40 parts of ferri sulph. pur. in 40 parts of aq. dist. Add acid sulph. pur. 7 parts; boil in a porcelain capsule; then add very gradually acid nitric pur., 12 parts, or until the solution does not decolorize a solution of permanganate of potassium. Evaporate to a solid mass, which dissolve in 40 parts of distilled water.

TAKE CARE OF YOUR TEETH.

The following suggestive paragraphs on this subject are from the Herald of Health:

TOOTH BRUSHES.

How can a good tooth brush be selected, and how should it be used?

ANSWER.—The brush should be selected for its moderate softness, and by no means for its stiffness; it should have rounded edges, both of bristles and handle, that neither may wound the gums; the length of time for each brushing of the teeth should never exceed from ten to twenty seconds; the water used should never be so cold as to cause the least uneasiness of the teeth, and the articulating face of the teeth should be even more carefully brushed than the labial or buccal. Twice, or at most thrice, brushing daily is as often as any denture will permit; and great caution is needed in brushing the gums from off the necks and even roots of the teeth will have to be exercised if more than one brushing daily is indulged in.

CLEANING THE TEETH.

What rule have you in regard to the use of tooth powders, soap, etc.?

ANS.—Dr. Flagg says:—"Tooth powders containing insoluble ingredients, such as ground bark, and especially pulverized charcoal, do nothing toward preventing decay of the teeth, and are eminently injurious by their insinuation under the margin of the gums. For very many years it has been noticed that the use of soap as an adjunct in cleaning the teeth has proved very efficacious in the prevention of decay; this is believed to have been particularly due to the alkaline reaction of certain kinds of soap formerly used, such as mottled Castile, for example; but of late years to this has been added the equally great, and possibly greater, efficacy of some of the most noted antiseptics, such as creosote, carbolic acid, etc., which, conjoined to saponaceous compounds, have wrought wonders in the retardation, and even arrestation of caries."

"Together with these, or any soaps, it is advisable to use some frictional powder, gentle or harsher, according to requirements; with some the addition of precipitated chalk is all sufficient to prevent the tendency to yellowish discoloration which is apt to accompany the frequent use of soap alone; but again, in other instances, it is found necessary to employ powdered cuttle-fish bone, or even finely pulverized (levigated) pumice stone."

DECAY OF TEETH.

What time of day do the teeth decay most rapidly?

ANS.—From midnight till the breakfast hour. The meals of the day help to preserve the teeth by friction and the flow of saliva, which to a great extent cleanses them of decaying matter; and thus it is that the teeth pass through the day and early part of the night without much progress of caries; but after retiring the remaining particles of acidifying food, the insipidating mucus, the developing fungi, all combine to make the hours toward morning pre-eminently the period of decay. Then it is that the chalk placed between the teeth late at night and allowed to remain there comes to the rescue, and by its antacid reaction prevents in great degree that disintegration dependent upon acidity and parasitic growth.

THE SCIENCE OF ADULTERATION.

BY S. P. SHARPLES, STATE ASSAYER.

VI.

Some months ago, in examining a specimen of cream of tartar, I found two or three per cent. of gypsum along with a considerable amount of rice flour. I was at a loss to understand how the gypsum came to be there. It was not in sufficient quantity to pay for its addition as an adulterant, and the adulteration was evidently rice flour. On looking the matter up I found that an adulteration article of rice flour containing from 15 to 20 per cent. of gypsum was on the market. This at once accounted for the gypsum in the cream of tartar. The manipulator, wishing to buy his rice flour as cheaply as possible, had bought the adulterated article.

Powdered sugar has been long notorious for its adulterations, but granulated sugar is generally supposed to be all right. I was recently, however, shown an article prepared from rice, which was not distinguished from granulated sugar by color or general appearance. It was said that this article was used for adulterating a particular grade of granulated sugar that was sent West to be used by the confectioners for manufacturing the powdered sugar.

Rice flour seems to be an extremely useful article in this branch of business. Hassall gives a list of no less than ten different substances in which it has been detected, and yet his list is not a full one. It has the great advantage over common flour that it does not cake when packed, and become clammy. It thus more nearly resembles the various spices and other articles with which it is mixed.

This adulteration can only be recognized by the microscope. The starch grains of rice are very small and angular; they polarize very slightly.

The adulteration of bread with alum has attracted a great deal of attention in England, and it seems also to be practised to some extent in this country. Numerous methods have been given for the detection of the alum, but none of these seem to be as satisfactory as the analysis of the ash. All the other methods are liable to error.—*Journal of Chemistry.*

THE TREATMENT OF DIARRHŒA.—In a paper in Virchow's Archiv, Dr. Hartzen observes that diarrhoea of all sorts goes along with an irritable state of the intestinal canal, and any increase of this irritability is to be carefully avoided. He considers that the more usual assistants are, in addition, irritants; and he instances among them the salts of lead, zinc, and bismuth. In all cases, soothing means should first be adopted; and of these, warm applications to the abdomen, in the form of bread poultices, or fomentations, are perhaps the best. The chief medicine recommended is opium, which soothes, but, in large doses, interferes with digestion. If the diarrhoea be so violent as to hinder the absorption of opium introduced into the stomach, then morphia should be injected subcutaneously. Of equal importance is the diet. If the person be strong, everything, both solid and fluid, should be withheld; but, where this cannot be done, the food should be of the lightest and simplest. The author especially refers to rice and arrowroot as simple vegetable diets, while any animal food given should be free from fat. Milk should not be too much used, and in any case should be boiled.

The monopoly line of steamers have made a dash at the grange boat, the Bastrop, and now prefer to carry freights at half card rates.—*Son of the Soil.*

Miscellaneous Letters.

OUR FINANCIAL POLICY.

The following clipped from a recent issue of your paper, is deserving of more than a passing notice:

The resolution below was first passed in Falls Grange, at Cottonwood Falls, Chase county, was endorsed by our County Grange, and also at our meeting of Masters and Matrons, to send delegates to the State Grange. This same resolution was passed almost unanimously by our State Grange, but for some cause was not published as passed. Please publish it.

Resolved, That the present national bank system should be abandoned, and the government should issue greenbacks instead, which should be convertible into national bonds, drawing a low rate of interest, say three per cent., and these bonds should be again convertible into greenbacks, and these greenbacks should be loaned to the people in each State, on real-estate security, in proportion to the number of inhabitants, thus securing a low rate of national interest, and a means by which any one with property can obtain money at a low rate of interest, compelling the capital that is now absorbing the wealth of the nation in interest to seek profitable employment in developing the country, adding to our material wealth and population.

As I am not a farmer, I cannot be a member of the Grange, and in one sense I have no right to object to the action of the Grange, yet, in a broader and higher sense there is naught which they do, specially in reference to public matters, in which I am not interested, and with me the whole community. While this is true of nearly every State, if not all, it is pre-eminently so of Kansas, so purely agricultural are all our industries. Have our friends of the Grange ever run down the lists of the members of the House of Representatives of this State, from our admission into the union until now? If they have, they know that in every such assembly of the lower House of our Legislature a majority of its members have been farmers. Hence no class in all our population is so directly responsible for the good or ill in our past legislation as the farmers of Kansas.

When therefore a representative body of this really ruling class of Kansas adopts such a resolution as the foregoing, it is high time for every one who considers this resolution as embodying some of the worst as well as some of the most insane political economy ever uttered outside of Mississippi, to protect against it.

I wonder if the farmers of this State, even those who so "unanimously passed" this resolution, really considered these words: "These greenbacks should be loaned to the people in each State, on real-estate security, in proportion to the number of inhabitants. Are they aware, reader, are you aware, that this experiment of governmental loans, based upon real-estate securities, has been tried and tested once in these United States? with what result?"

During the currency inflation period, prior to the crisis of 1837, when banking ran riot, and an irredeemable currency was counted even more of a national blessing than now, the State of Mississippi established two banks, the Planters and the Union, and to supply the needed soundness borrowed upon her bonds, several millions of dollars. Under this same specious argument of "compelling the capital * * * of the nation * * * to seek profitable employment in developing the country, adding to our material wealth and population," the banks were encouraged to loan to every needy planter in the State, and to further the material wealth of each town lot speculator desiring to build his village into a city, by multiplying houses.

The financial crash of 1837 came, and the money of the banks was poured into their counters for redemption, but all, or so nearly all of their assets consisted in notes secured by real-estate, taken too, at what seemed conservative valuations, that the banks were forced to suspend. The makers of the notes could not pay for they had gone into material improvements or extravagant living, encouraged by the seeming prosperity borne of a redundant currency. The banks could not realize by foreclosures in season to meet their own obligations to deluded depositors, who trusted the business intelligence of their managers or the high sounding promise of governmental aid from the great State of Mississippi; and the whole bubble of seeming prosperity burst, leaving a burden of debt from the people to the banks, and from the banks to the State, while the State owed for the bonds which European capitalists had been unwise enough to purchase.

The result was easy to foretell. The debtor class in Mississippi consisted of the large majority of the influential go-ahead planters, traders, town lot speculators and politicians of the State; and they readily elected a majority of the legislature, who devised a new way to pay old debts. The banks were compelled to sell the real-estate mortgages held to the highest bidder, but such restrictions were thrown about the competition for purchasing the mortgages that none bid same upon their own notes and mortgages; and mere paid debts of thousands of dollars with tens. The people of Mississippi, individually, were freed from debt, the banks being hopelessly insolvent were wound up and none owed a dollar, save the State, to its bond holders. Repudiation of the State debt became a party cry, and a people who would swindle the banks were not slow to swindle the bond holders, and repudiation was a success in Mississippi; and to this day the bond holders have never received one cent.

Did that repudiation of their honest debts really benefit the Mississippians? Whether you

look at the State in 1840, just after repudiation, or in 1860, twenty years thereafter, and compare its people with their neighbors, who did pay their debts like honest men, the record proves that honesty then and there was as much good policy as it is to-day.

Can any man at all acquainted with the working of political affairs in this nation, or who has read history with the slightest attention, doubt for one moment that to loan upon real-estate securities the greenback currency would and could end only in repudiation? Ninety-nine out of every hundred who owed for such a loan would favor first a congress that would grant an extension upon the loan, then a rebate of interest, and finally a repudiation or virtual repudiation of the whole debt.

So strong is my belief in the good sense of the farmers of Kansas, Grangers and all, that I cannot believe any respectable minority of them are favorable to such an idea as the government loaning its credit to individuals. They must be deceived by some specious argument or they could not give their adhesion to any such chimera.

I have not written this under any impression that there is the remotest danger of such a scheme being foisted upon any political party; but such a resolution so lowers the estimate of business men in the wisdom of the Grange, and even, it seems to me, of all sensible men, as to seriously impair the usefulness of the Grange. I have been one of those who hoped that the Grange, without entering the political arena would exert a needed and salutary influence upon our political parties, by assisting to eliminate corruption and demagoguery therefrom. This resolution made me doubt whether I read aright the omen of the Grange.

My article is too long to respond to another portion of the resolution, and probably, if not answered by some one else, I may endeavor to do so at some future time. OLD FOGY.

For the Kansas Farmer.

A SKETCH FROM REAL LIFE.

BY JAMES HANWAY.

That which is valuable and worthy of possessing, is not often obtained without labor both mental and physical.

Persistence and energy are necessary, for without this our undertakings will fail. Tact, or the faculty of perception or discernment which is discernable more in some individuals than others, is also a great advantage in carrying out our undertakings. Just as we become possessed of these essential qualities, our success in life depends.

What is called "bad luck" is only a deceptive phrase, made use of by those who lack perseverance and energy.

The age is past when a belief in a good or evil genius controls our destinies—yet we can hardly ignore the fact that many persons in their conversation, frequently talk as if there was an intermediate being between angels and men, which interfered and controlled our daily life.

This imaginary and fictitious influence produced a powerful effect, on the minds of mankind in the early ages of our race, and it is not surprising that we find it cropping out occasionally in the unlettered portions of our population.

Cause and effect are alike uniform in the moral, as they are in the physical world; there is therefore no such thing as "luck" or "chance" strictly speaking. Everything is governed by cause, or rather all things are in turn effects of some preceding cause.

Many years ago, some thousand of miles from our present locality, there lived in a village of some fifteen hundred inhabitants, a poor and industrious man who followed the profession of a barber, making wigs for the bald-headed, and in accordance with the practice of the day, he followed bleeding, or in other words "blood-letting," for this was on his sign, which hung before his shop door. He was therefore what was known as a "barber-chirurgian" a calling not now common.

He was a man of limited education, he was temperate in his habits, frugal in his expenditures, and no way inclined to live beyond his income.

His small village garden was the delight of his idle-hours, he had many rare plants which he had secured by the generosity of some of his more wealthy neighbors.

One season his garden was beset with an obnoxious species of insect which consumed and destroyed it. The insect was a stranger in his section of country, it had evidently migrated from other parts of the country. Like the Rocky Mountain locust which we have become late so well acquainted. Being a man of observation, he collected all the information he could in relation to the history of this insect.

This was the starting point which led him to study the habits and characteristics of the insect world, which in after years became his chief study and occupation.

While following his humble calling for a living, he devoted all his spare time to the study of entomology. Every year he added to his cabinet of insects; in the course of a few years by constant application of his faculties to this study he soon became one of the best entomologists in that section of country. He was generally known among his rustic neighbors as the "bug hunter." Men of a scientific turn of mind frequently visited his humble dwelling, for the purpose of gratifying their curiosity in examining his valuable collection of insects. For all the various species were properly classified in their respected order.

Years of labor and perseverance could only have secured this result.

A gentleman, a stranger to him, called to

examine his collection, he desired to purchase certain drawers containing some rare specimens of the insect world, but the barber could not be induced to scatter his valuable collection. The stranger then offered him for the whole collection \$1500, and the bargain was agreed to. It was purchased and donated by the purchaser to a public scientific institution for the instruction of its pupils.

This addition to the fortune of our scientific barber, induced him to purchase a few acres of land in the suburbs of the village. He quit the profession he had followed for many years, and moved on to his new purchase. The unexpected success he had experienced only stimulated him to extra exertion in the branch of study he took so much delight in.

His name as a self-taught, practical entomologist became known, and for many years he was visited by the scientific world who were desirous of adding to their cabinets of insects. He made science profitable to him, what few, perhaps can say. He lived to a good old age, respected and regarded as the "lucky barber."

Lane, Franklin county.

Patrons of Husbandry.

THE POMONA OR FIFTH DEGREE GRANGE.

We have been told that the 5th degree grange, was to be the business arm of the organization, a link between the subordinate and State grange, made up from the granges of the county and from its thorough organization would be able to accomplish what the County Councils have not. Our objections to this additional organization have been based more upon the class, qualifications of its members and from the firm conviction that a business organization must be free from useless ceremonies, than upon any feeling we could possibly have against it as a grange. It matters not what the business organization of the grange is called, whether it is Council, Grange or Commercial Agency, if the organization combines the essentials of business success. What are these essentials? They are, as we see the matter, the presence of the best business minds of the subordinate granges, capital to do business with, and freedom from useless and senseless form and ceremony, to enable them to give their attention as business men to business. This is a matter of common, practical sense, upon which members may reasonably differ, and none but narrow minds would charge a lack of loyalty to the Order because there is a difference of opinion as to what form of organization is best. If the county grange is to be the business organization, it must incorporate and place capital in its treasury requisite to such business as it may conclude to attempt. The business organization, whatever it may be called, must be a responsible and incorporated body. Idle talk about business costs nothing, but to carry out any well-defined co-operative plan for purchasing seed, implements or supplies, or to handle the crops, requires, for success, good judgment, business experience and money.

Now comes the Executive Committee of the Kansas State Grange, giving its aid and support to a system of commercial agencies, incorporated with capital stock. These agencies are to be composed of delegates chosen for their business ability. If these agencies are to become the business organization of the grange, then what is the practical use and benefit of the 5th degree grange? Will it pay to support a purely ornamental organization, that has neither a field of labor or a work of any kind to accomplish? "Oh!" says my ritualistic friend, "we want the 5th degree grange to secure the additional degree," &c. Let us see about that. There is little doubt but the absolute intention of the Pomona Grange was to secure a grange made up of Masters of subordinate granges and their wives who are Matrons. The opposition to such a privileged class organization has been such as to secure a change, admitting three delegates from each subordinate grange.

Thus it will be seen that it is only a question of time when all 4th degree members may receive the 5th degree, in the Pomona Grange. Then we ask what is the practical utility of this degree? Is there a single lesson or a principle that may not be exemplified in the four degrees of subordinate granges? Certainly not.

The grange without question requires a business organization, and let this be a representative body, composed of the best business talent of the subordinate granges who may meet as reasonable men of business without being hampered with the forms and ceremonies of the grange room. The energies of the membership may well be concentrated in keeping alive and developing the subordinate granges.

The good sense of the American farmers will demand of the National Grange, sooner or later, that all class distinctions be removed and that a purely representative form of grange government be adopted. The farmers of the country can certainly meet together to consult upon questions affecting their interests and prosperity without creating among themselves class distinctions and special privileges. This great organization is in fact a protest against these very abuses, and to build up within the gates, what it protests against outside, is an inconsistency we are unable to fathom.

A uniform system of Patrons' Commercial Agencies may be successfully formed at all convenient business centres and shipping points, for the transaction of such business as may be within the scope and capital of the organization. We shall present the coming week some further considerations concerning the possibilities of business co-operation among farmers.

EDITOR FARMER.

ACTION OF GRANGES UPON VARIOUS SUBJECTS.

Union Grange No. 498, Labette county, Kansas, F. L. Hamilton, Secretary, sustained by resolution the position of the FARMER upon subjects of Grange reform as published in platform.

McDowell Grange No. 1079, of Davis county, Henry B. Johnston, Secretary, passed a resolution urging all work of Granges be done in fourth degree.

As all business of the Order is done in the fourth degree, the above resolution was unnecessary.—ED. FARMER.

Laurel Grange No. 526, of Brown county, Kansas, passed a series of resolutions of respect and condolence upon the death of a worthy member, Bro. R. B. Coe, who died May 28th.

At a regular meeting of Junction Grange No. 1009, Marshall county, held June 5, 1875, the following resolutions were presented and unanimously adopted:

WHEREAS, The crops of the country are being destroyed by swarms of young grasshoppers and other insects.

WHEREAS, The birds seem to be the farmer's best friend in destroying these pests, and WHEREAS, There are certain persons in this community who, from thoughtlessness or ignorance, are wantonly destroying these birds, therefore, be it

Resolved, That we as members of this Grange will not allow any one to kill birds on any farm within the jurisdiction of this Grange, and that we hereby give notice to all persons found killing birds on our farms that they will be prosecuted to the fullest extent of the law.

Resolved, That a copy of these resolutions be sent to the Blue Rapids Times and KANSAS FARMER for publication.

ROBERT ROBERTSON, Master.

FAIR PLAY GRANGE NO. 308.

At the last regular meeting of our Grange, the KANSAS FARMER platform was read, discussed and approved by

Resolved, That while we recognize our duty to support the Constitution of the National Grange as it is, we see nothing in our obligation as Patrons, that need prevent our working for all needed reforms and amendments to that Constitution.

Resolved, That the Secretary be instructed to communicate these resolutions to the editor of the KANSAS FARMER.

L. E. LESTER, Sec'y.

Franklin county.

Maine has 170 sub-ordinate granges and rapidly growing in membership.

In Pennsylvania a number of the granges are building Grange Halls and the work of organization continues.

At a meeting of Union Grange 246, of Minnesota, the following resolution was adopted:

Resolved, That all of the members of our grange keep an accurate account of their farming transactions—number of acres cultivated and seeded to each kind of grain, cost of cultivation, amount of each kind raised and value thereof; number of horses, cattle and other animals raised, and value and productions thereof, and report the same at first meeting of the grange after the knowledge is thus ascertained.

In Indiana (Dearborn County) Council passed the following resolution:

Resolved, That in the opinion of this council the organization of the Pomona, or county grange of the fifth degree, will be injurious to the best interest of the Patrons of Husbandry, and we earnestly request the officers of the State Grange to suspend the organization of such grange until the annual meeting of the State Grange.

The following words full of sense are from the American Patrons.

We do not mean to be fault finders, yet we do propose to be honest critics—not mere panegyrists of an organization which is yet far from perfect in its constitution and in many of its details. We regard it as the best that has ever been given to the farming community—in this that the original fabric, approximated perfection, and was so constructed that any imperfections could be afterwards remedied without jeopardizing the whole edifice.

We do not now regard it that the members of the National Grange, are corrupt—in fact, we think it far otherwise. We have full confidence in them, and hope that what is true this year and in the past of that of body, will continue to be equally true in the future. But what we particularly object to is any movement looking to the centralization of the power and money and property of the Granges in the National Grange because of dangers that may accompany such centralization.

We are discussing a question of policy, and not attempting to investigate the action of the officers or members of the Order. Is it good policy to build up a rich and powerful central organization, that could, in case of an emergency, exist contrary to the will of the Subordinate Granges, and without their earnest support and co-operation? Or, is it better to have the National Grange remain a popular annual assembly of delegates fresh from the people, and coming together at different places as accident or choice may, from time to time, dictate, as now? We know that it will be said no danger exists that can change the character of the annual assemblies, yet, there are good and sound men in the Order, East, West, North and South, who are restive under any proposition which tends toward removing the National Grange further from people, and they regard this fixing of a permanent headquarters, as an act that will have that effect.—American Patron.

National Lecturer Thompson will deliver lectures at the following time and places: At Hutchinson, Monday, July 26; at Wichita, Tuesday, July 27; at Wellington, Wednesday, July 28; at Winfield, Thursday, July 29; at Augusta, Friday, July 30; at Eureka, Saturday, July 31; at Humboldt, Monday, Aug. 2, 1 p. m.; at Garnett, Tuesday, Aug. 3, 11 a. m.; at Labette City, Wednesday, Aug. 4, 11 a. m.; at Osage Mission, Thursday, Aug. 5, 11 a. m.; at Girard, Friday, Aug. 6, 11 a. m.; at Ft. Scott, Saturday, Aug. 7, 11 a. m.; at Pleasanton, Monday, Aug. 9, 10 a. m.; at Paola, Monday, Aug. 9, 2 p. m.; at Olathe, Tuesday, Aug. 10, 10 a. m.

The Patrons are requested to be prompt at the place of meeting and also to make arrangements for a hall for the speaking, as Bro. Thompson travels by rail and cannot remain, to exceed one hour and a half, at one place.

POWERS AND DUTIES OF A GRANGER.

The following are taken from the "Patron's Parliamentary Guide," (official) and we publish them as revised and adopted at the 8th annual session, Feb., 1875:

A grange cannot change its name or number after its charter has been issued.

Degrees may be conferred at either regular or special meetings. At special meetings, called for the purpose of conferring the 1st, 2d or 3d degree, it is not necessary to open in the 4th degree. A grange may close from any degree in which it has been sitting.

It is not allowable for a grange to discuss the merits or demerits of a candidate.

No vote can be taken on any question except in the 4th degree.

In balloting for candidates, the ballot is secret, and no member can be required to tell how he voted.

No person can be admitted to membership free.

The entire membership fee must accompany the petition, and cannot be divided among the several degrees.

A grange cannot vote back to a member any portion of the membership fee.

A grange can provide by by-law for more than one regular meeting a month, but must have at least one.

A subordinate grange cannot move its place of meeting within the jurisdiction of another grange, without the consent of the grange whose jurisdiction is thus infringed upon.

A grange cannot have two places of meeting and claim jurisdiction from both as centers.

A person who is elected to membership or office in any manner other than by ballot is not legally elected.

No person is eligible to office in any grange, either National, State or Subordinate, who is not a member thereof.

A grange cannot ballot upon an application for membership at the same meeting upon which it is received.

A grange may ballot for a candidate and confer the 1st degree upon him at the same meeting.

A grange cannot ballot for more than one candidate at the same time; each must be balloted for separately.

A grange can sit in different degrees during the same meeting.

A grange cannot divide into two granges and divide the property.

A new grange cannot be formed in the jurisdiction of a suspended grange, during the time of its suspension.

TOPICS OF GRANGE DISCUSSION.

Mrs. S. M. Smith in an essay on the above subject published in the *Prairie Farmer* says:

To me it seems that either for papers to be read at these socials, or for talk and discussion within the Grange, living, practical questions should be selected, such as are intimately connected with our everyday lives, rather than abstract and metaphysical ones that have long puzzled older and wiser heads than ours, and whose solution, if we could accomplish it, would add very little to our happiness. I believe, that we should endeavor to bring to the discussion of such questions some original thought, or personal, practical experience of our own, that shall give to those who listen some new light upon the subject from our treatment of it. If we do not do this, if we only present other people's ideas and theories that have already been worn threadbare by repetition, what do we or our hearers gain thereby? We cannot hope that they will be instructed or made wiser by any such efforts of ours, or that they will even be interested, unless a momentary interest may possibly be aroused by some "trick of language" that shall give to the idea a semblance of originality. One new truth, gathered by our own observation, or proven by some of our own experience, will be of far more value to us, and excite more interest, I fancy, with the majority of us, than many pages of flowing rhetoric, from which we go away without having imbibed an idea that will even benefit us morally or materially, and which leaves upon our minds only the impression of an array of glittering generalities, or of ideas long familiar.

Brother Allen of Missouri rebukes, through its own columns, *Colman's Rural World*, for reprinting an article from the *Semi-Tropical Farmer* of California, wherein the writer opposed—as a very great many of the soundest Patrons and staunchest grange papers in the country do—the county grange. In one aspect this is purely a matter of taste, for which no one can pretend to censure the man who wrote the letter or the paper that published it; in a more general aspect it concerns every member of the order. As yet all attempts to dictate to Patrons what they shall read or not read, what they shall think or forbear from thinking, if made with sufficient frequency have always been made indirectly, generally by the personal organs of the would be dictators. When, however, a man, fallible as any of his fellows and with the presumptive evidence of his personal prejudice in the matter strongly against him, attempts openly or in his official capacity to make himself a censor and petty Pope and to keep from those over whose interests he is presumed to watch everything that does not coincide precisely with his preferences or prejudices, then he is guilty of an un-American act that can only provoke censure and suspicion. The rank and file of the order, by whom and for whom it exists, will not be likely to receive such pretensions as these without resisting them; and if one man or class is ever found arrayed on so vital a point as freedom of discussion and opinion, it will be a bad day for that man or class.—N. Y. World.

TOLEDO GRANGE—RESOLUTIONS.

At the last meeting of our Grange, the following preamble and resolution was adopted:

WHEREAS, Considerable dissatisfaction with the higher degrees of our Order is being expressed by many patrons and, whereas, we consider it prudent to hold the sessions of the State and National Granges in the higher degrees to better guard the best interest of the Order, as only those whose hearts are in the work will take the higher degrees or attend the higher Granges; therefore

Resolved, By the officers and members of Toledo Grange No. 620, P. of H., that we are not opposed to the fifth and sixth degrees, but to avoid discord and dissatisfaction in the Order, we request that the restrictions be removed so that all fourth degree members in good standing be entitled to the same by paying the required fee.

The Secretary was ordered to furnish a copy of this resolution to the *Spirit of Kansas* and *Chase County Leader*. WM. OSBORN, Sec'y. Toledo, Kansas.

OSBORN'S

Grain & Seed Cleaner

MANUFACTURED BY

E. H. OSBORN & CO., QUINCY, ILL.

THESE celebrated machines which met with such universal favor during 1874, have had a large number of valuable improvements added, besides they are being made much stronger. The fan has also been improved so that the operator has complete control of the wind force, checking it instantly, or turning on the full force.

We still claim to have the only machine on the market that will do what ours is guaranteed to do—separate oats and other refuse from Spring Wheat, separate Rye from Wheat (for seed perfectly), separate Oats from barley, separate and clean thoroughly Timothy and Clover, Clean Flax seed perfectly, removing wild mustard, &c., and does everything in this line required. As a Timothy and Clover cleaner, our machine stands pre-eminently ahead of all others. They are in use in nearly every large seed warehouse in the leading cities. Machines shipped on trial to responsible parties. Send for circular. We use costly material, and cannot compete with the cheap article of flanning mills on the market. We have put our price down to the lowest figure, \$35.00 cash. Flax screens, \$5.00 extra. Warehouse size, \$60.00 Flax screens, \$8.00 extra. Do not say the above cannot be done, but test it. Please state where you saw this advertisement.

THE GLEN FARM HERD.

Public Sale!

Of 100 head of first-class

SHORT HORN CATTLE,

The property of J. S. LONG, Monroe, Jasper Co. Iowa, to be sold on

Wednesday, September First, 1875,

On the Fair Grounds, Des Moines, Iowa.

This herd was established in 1865, and no public or private sales of heifers has been made up to this time, and the purchases made from the different herds in the east during that period, together with the natural increase, has enlarged the herd so as to render it necessary to be reduced in size. The sale will comprise the entire herd over one year old, except few not in sale condition. Since the herd was founded, care has been used to secure the services of the best males to be found in the country. Among them 8th Duke of Goodness, Plimwood Lad, Breasplate Jr., Major Duncan. The females are representatives of many of the most popular families of the breed, and for the individual merit of the entire lot, we can safely say are equal to any herd of like size ever offered for sale in the west.

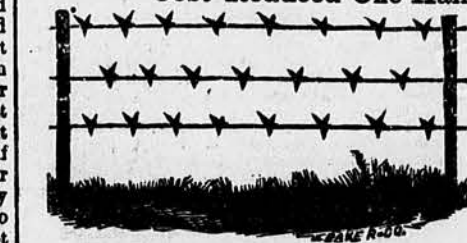
Terms of sale, six months credit, without interest if paid when due; if not, ten per cent. from date. Notes payable at First National Bank, Newton, Iowa. Liberal discount for cash.

Catalogues on application. J. S. LONG, Monroe Jasper county, Iowa. Col. J. W. JUDY, Auctioneer. N. B. The day after this sale, at same place, Dr. G. Sprague, D. M. Flinn and Mack Flinn, sell a large herd of Short Horns.

FENCING REVOLUTIONIZED.

Effectiveness Doubled.

Cost Reduced One-Half.



Kennedy's Patent Wire Fence Barb. COST OF Fence above, exclusive of post, only 30 cts. per rod. Wire fence, old or new, is absolutely impassable. The barb is clasped immovably around the wire after the fence is built. Three wires around the wire after the fence is built. Three wires around the wire after the fence is built. Farmers, before building any more fence, or setting any hedge, examine into the merits of this fence. Enquire of your hardware dealers for samples and circulars, or address KENNEDY, BARNES & CO., Aurora, Ill.

CHAMPION Force Feed Grain Drill, AT REDUCED RATES.

Send for Descriptive Circular to H. REINSTEDELER, Wholesale Dealer in Farm Machinery, St. Louis, Mo.

NICHOLS, SHEPARD & CO'S. "VIBRATOR" THRESHER.

The BRILLIANT SUCCESS of this Grain-saving, Time-saving THRESHER, is unprecedented in the annals of Farm Machinery. In a brief period it has become widely known and FULLY ESTABLISHED as the LEADING THRESHING MACHINE.



GRAIN RAISERS REFUSE to submit to the wasteful and imperfect work of other Threshers, when posted on the vast superiority of this one, for saving grain, saving time, and doing fast, thorough and economical work.

THRESHERMEN FIND it highly advantageous to run a machine that has no "Beaters," "Pickers," or "Aprons," that handles Damp Grain, Long Straw, Headings, Flax, Timothy, Millet and all such difficult grain and seeds, with ENTIRE EASE AND EFFECTIVENESS. Cleans to perfection; saves the farmer his thresh bill by extra saving of grain; makes no "Littering," requires LESS HAY AND ONE HALF the usual Belts, Boxes, Journals, and Gears; easier managed; less repairs; one that grain raisers prefer to employ and wait for, even at advanced prices, while other machines are "out of job." Four sizes made with 6, 8, 10 and 12 horse "Mounted" or "Power" Drives, also a Specialty of Separators, "alone," or "expressed" for STEAM POWER, and to match other Horse Powers. If interested in grain raising, or threshing, write for illustrated Circulars (sent free) with full particulars of sizes, styles, prices, terms, etc.

NICHOLS SHEPARD & CO. Battle Creek, Michigan.



FARM GATE HANGER, or the Barn Door Hanger, modified for use on the Farm Gate. A durable, convenient and cheap Gate Hanger. Sold by hardware trade generally. L. W. NOYES, Chicago and New York, 88 Chamber Street.

CARDS, Bill Heads, Letter Heads, Statements etc., neatly and cheaply printed at the KANSAS FARMER Book and Job Printing Office, Topeka, Kansas.

Literary and Domestic.

EDITED BY MRS. M. W. HUDSON.

IRONING DAY.

We were long ago firmly convinced that in a house where people live, eat, sleep and breathe, is not the proper place to have washing done, but until we can have better and cheaper laundry facilities, poor people will be obliged to do it, or have it done at home; this evil we must put up with until our civilization progresses a little farther, but is it not possible for house-keepers to mitigate somewhat the evils of ironing day, or ironing days we should say.

Is it sensible for a mother to stand over the ironing board from one to three days in a week, ironing, fluting and crimping children's garments, which can only be worn so many times and then put through the same process again?

Or, if she has help, is it sensible for her to give up all reading time, all out door recreation, all time with her children and her friends and do the household work for half the week, that her help may do that everlasting ironing? We think not, and the only way to make this work consume less time, is to make and wear plainer clothing. Poor people cannot afford to wear ruffles and knife pleatings on dresses that have to be washed and starched and ironed, and as long as the wife of the poor minister, the poor merchant, the poor mechanic or the poor farmer, makes her eight cent calico in the same style that the bankers wife makes her organdie and her fine cambric, that long will she show her folly in toiling over the ironing board and cheating her brains to no purpose, for a cheap dress can be both plainly and tastefully made, and will nearly always look better than if profusely trimmed.

If wealthy people choose to indulge in this expensive ironing, let them, and be content to wait for that as well as other luxuries until you can afford them. How ridiculous it is to say that a hot fire all day which consumes besides fuel the mother's temper and vitality, and the children's comfort, is cheap; it is a very expensive luxury. Of course we have to iron, and too, have to have a hot fire if we want to do it expeditiously and well, but in this season particularly, the task should be made as short as possible.

Both clear starch and flour starch should have a few spoonfuls of gum arabic water stirred into it, and there should be a piece of sand paper or a little fine salt sprinkled on a piece of paper to rub the iron on. Where there is more than one pair of hands to do the work, one pair should begin to iron as soon as it is daylight if possible in the summer time and thus in a couple of mornings get warm work out of the way while the atmosphere is reasonably cool.

AN IRISH FABLE.

"The Bad Son and the Good Son"
"An' it was once long ago, in the old country," said M. Biddy, "there was a livin' fine, clane, honest, poor widdy woman, an' shavin' two sons, an' she fetched the both of 'em up fine and careful, but one of them turned out bad entirely. An' one day says she to him, says she:

"I've given you your livin' so long as I've I can, and it's you must go out into the wide worruld to make your fortune."
"Mother, I will," says he.
"An' will ye take a big cake wid me curse, or a little cake an' me blessing?" says she.
"The big cake, sure," says he.
"So she baked a big cake and cursed him, and he went away laughin'. By and by he came forinist a spring in the woods, and sat down to ate his dinner off the cake, and a small little bird sat on the edge of the spring.
"Give me a bit of that cake for the little ones in the nest," says she, and he caught up a stone to throw at her.

"I've scarce enough for meself," said he; and she bein' a fairy put her bane in the spring and turned it black as ink, and went away up in the trees. And while he looked for her to kill her, a fox went away wid his cake.
"So he went away from that place very mad, an' nixt day he stopped, very hungry, at a farmer's house, and hired out to tend the cows."
"Be wise, says the farmer's wife, for the next day is belongin' to a giant, and if the cows get in his clover he will kill you dead as a stone."
"But the bad son laughed and went away out to watch the cows; and before noon time he went to slape up in a tree, and the cows all went in the clover, and out comes the giant and shook him down out of the tree and killed him dead, and that was the end of the bad son.

"And by the next year the poor widdy woman, she says to the good son:
"Ye must go out into the wide worruld and make your fortune, for I can kape you no longer," says she.

"Mother, I will," says he.
"An' will ye take a big cake wid me curse, or a little cake an' me blessing?" says she.
"The little cake," says he.

"So she baked it for him and gave him her blessing, and he went away, and she a weepin' after him foine and loud. An' by and by he came to the same spring in the woods where the bad son was before him, and the small, little bird sat again on the side of it.

"Give me a bit of your cake for me little ones in the nest," says she.
"I will, says he, an' he broke off a foine piece, and she dipped her bane in the spring and turned it into sweet wine; and when he bit his cake, shure an' she had turned it into a fine plum cake intirely; an' he ate and drank and went on light-hearted. And nixt he come to the farmer's house.

"Will ye tend cows for me?" says the farmer.
"I will," says the good son.

"Be wise," says the farmer's wife, "for the clover field beyant is belongin' to the giant, and if you lave in the cows he will kill you dead."

"Never fear!" says the good son; "I don't slape at my worruld."

"And he goes out into the field and lugs a

big stone up in the tree, and thin sinds ivory cow far out in the clover field, and goes back ag'in to the tree. And out comes the giant a roarin' so that you could hear the roars of him a mile away; and when he finds the cow-boy he goes under the tree to shake him down, but the good little son slips out the big stone, an' it fell down and broke the giant's head intirely. So the good son went running away to the giant's house, and it bein' full to the eaves of gold and silver and splendid things!

"So what fine luck comes to folks that is good and honest! An' he went home and fetch his old mother, an' they lived rich and contented, and died very old and respected."—Sarah O. Jewett, in St. Nicholas for July.

THE HISTORY OF LADY FRANKLIN.

There is something both touching and appropriate in the petition of Lady Franklin, lying in dangerous and perhaps mortal illness, for the prayers of the American people. It was an American expedition which brought to an end her terrible and long lingering suspense. From McClintock and his brave comrades she at last learned the not to be doubted news that her gallant and heroic husband had perished amid the mysteries of the farthest North. Lady Franklin did not need this proof of American interest in her life purpose and heart's work; her sufferings, her noble heroism, her unselfish devotion, her untiring energy, her uncoward spirit, have always received our warmest sympathies. Surely her appeal will be answered, it not in the churches—where perhaps it will be—at least in thousands of hearts impressed with the beauty of her devotion throughout the land. The old classic tales of wifely fidelity and sacrifice almost pale before her heroic search for her husband's fate for more than thirty years. Left alone at an age when it is proper to be joyous, and excusable to be giddy and forgetful, she has passed early and later youth, womanly prime, and oncoming age in this constant heart-wriving, yet undiminished pursuit. The pleasures, the ambitions of life were afar off from her; her soul dwelt in the grim solitudes of ice deserts; her spirit was in the vague regions where there is nothing of vegetation, where an awful and eternal silence reigns, but where, also, she believed that her hero husband, dead or alive, must be. We may guess that for long years there dwelt a hope in her heart that Sir John was still alive; that he had somehow escaped, perhaps, from the vast ice prison; that he had passed by perilous wanderings, and it might be by shipwreck, far beyond the frozen North, and been thrown upon some remote but hospitable land, where the grass grew and men could live. Then came the truth, that the vestiges of Franklin and his men had been found, vestiges which left no doubt of their identity, or of the long ago accomplished fate of the voyagers. Certainly, even the saddest, is better than harrowing suspense; and Lady Franklin was as heroic under the sun as her husband was. She had borne up nobly while there was still hope. Franklin must indeed have been a noble man to have inspired such devotion in the hearts of two self-sacrificing wives. His first wife, Eleanor Porden, lay mortally ill when he set out on his second Arctic expedition, in 1825. He offered to remain till she was well; but she begged him to proceed on his voyage, and placed in his hands a silk flag, which she asked him to hold in the Polar Star. He sailed; and this day after his gentle young wife died. He returned in three years to wed Jane Griffin, the lady who is now known as Lady Franklin. The story of her devotion is household words in both countries. What she has suffered none can tell.

WHAT ARE JETTIES?

The Scientific American gives a familiar description of the jetty system which is to be applied in the improvements at the mouth of the Mississippi, as follows:

The long discussion relative to the most practicable mode of improving the mouth of the Mississippi, so as to render the same passable to vessels of deep draft and thus open the river ports to direct ocean traffic, was virtually terminated by the granting of an appropriation by the last Congress, for the construction of a system of jetties at one of the passes through which the stream enters the Gulf. The plans involving canals, which have been strenuously advocated by many eminent engineers, are therefore for the time at least set aside, and to Captain J. B. Eads, an engineer now widely celebrated for his successful construction of the St. Louis Bridge, has been entrusted the task of causing the mighty current of the Father of Waters literally to undo its own work and to break down the barrier which itself has created.

The delta of the Mississippi is formed of narrow strips of land, mostly low lying banks, through which the river winds until it makes its exit to the Gulf by a number of narrow passes. In some of these channels, previous attempts have been made to deepen them by dredging, with but partial success, however, as a single flood has been known to carry down sufficient sediment to fill them to their original depth; and the current besides, emptying into the open water at the mouths, speedily left at that point bars of blue clay, surmountable only by light draft ships. The gist of Captain Eads' plan will now be readily apprehended when it is regarded as shifting the point of deposit of these barriers from the shoal water at the entrance of one pass, out into the deep water where filling up by natural causes is impossible. By this means the river current is to be made to cut out and scour its own channel across the present bar. To do this, it is obvious that the banks of the pass must be extended so as to lead the stream far enough out; another section of conduit, as it were, must be added, and this is now to be formed by the submarine dykes or jetties.

The material of which these structures are to be composed is willow twigs bound in bundles, termed by engineers, "fascines," eight or ten feet in length, and about as many inches in diameter. A large number of fascines at a time will be lashed together to form rafts, the first of which will be of seventy-five to two thousand feet in width, the largest rafts being sunk in the deepest water. The rafts will next be towed to the proper point, there loaded with stones and submerged, and thus the work will continue, one raft being sunk above another until the surface is reached. Each line of rafts will be narrower than the one below it until the upper course will not be more than ten feet wide. The two walls which will thus be constructed will be prolongations of the banks, and between them will form a channel with sloping sides. In the course of time the interstices of twigs and stones will fill with sand and mud, so that eventually, two solid submarine levees will be produced. Very little pile work, it is said, will be required except, perhaps, at the head of South Pass, which is the outlet at which the jetties are to be built, in order to provide for the proper regulations of the volume of

water in the new channel at various stages of the river.
Captain Eads has already begun his surveys in which work, together with the making of the necessary contracts for material, labor, etc., the summer will be consumed. The first raft, it is expected, will be sunk by the beginning of October next.

NATURE'S VOICES.

Nature is not silent, but day and night she speaks a language varied and beautiful. Stern truths she tells, softer lullabys she sings than ever mother sang to restless babe, music has she, such as even Beethoven or Mendelssohn could not equal. Listen to her eloquent teaching. Pause awhile in the eager pursuit of your favorite phantom and hear the thousand and melodious voices that are forever ascending from the earth. Nature sings an anthem that is ever heard by those who love her. Well paid are her listeners, for she will purify your desires, make your aims loftier and extend over you an influence soothing as balm to the open wound.

Let her talk to you through bird, and flower, and tree, through mountain, ocean and sky. All that is fragile, transient and beautiful tells you of the love and care of God, that extends even unto the sparrows and the lilies of the field. All that is majestic and sublime speaks to you of a wisdom and might vast as is eternity. Beautifully has the poet expressed it—

"To him who in the love of nature, holds Communion with her visible forms, she speaks A various language; for his gayer hours She has a voice of gladness, and a smile And eloquence of beauty, and she glides Into the darker musings with a mild And gentle sympathy, that steals away Their sharpness e're he is aware."

Then open your heart to her sweet influences, and they will elevate and ennoble you and you will go out in the contest with new energy and a higher purpose.

M. G. BERTON.

THE CLIMATE OF PIKE'S PEAK.

The highest point in the world where arrangements are made for scientific observations is the summit of Pike's Peak. There, 14,366 feet above the level of the sea, is a rudely constructed stone house, where live three men, the observing sergeant and his two assistants. During seven months of the year these men are shut off from all intercourse with other human beings. Early in November they house themselves and live on the provisions they have stored up and the meats they have buried in the snow. When the atmosphere is in a proper condition for the telegraph to work, some scraps of news are obtained, but they can not reach the world below nor the world get to them. The observations made from this lofty point are sent to almost every enlightened European nation. The station was established here in August, 1873, the special object being to learn something about the upper currents of the atmosphere. The principal instruments used are the barometer, thermometer, hygrometer, anemometer, and the rain-gauge. One of the most remarkable phenomena seen on Pike's Peak is the electric storm. A correspondent of the New York Tribune recently visited the summit signal station, and to him Mr. Brown, the observing sergeant, thus describes these storms:

"They generally begin with hail, and last from half an hour to four hours. The whole atmosphere is full of electricity. Sheets of fire are everywhere. Sparks crackle about your clothes and in your hair, and fill the buffalo-robes and the bedding. The electricity comes through the roof, through the windows, and up from the floor. It seems as though you are in a battery. If you go out doors a cloud of electricity rests on the whole Peak. It comes from the rocks; the clouds are full of it. The lightning plays below in fearful intensity—one's hair literally stands on end."
Mr. Brown also stated that he had seen the frost a foot deep all over the summit, on windows, doors, and particularly on metals. Sometimes it gathers on the telegraph wires to the depth of eight inches, and frequently breaks the wires and stops communication. Such are some of the features of life on Pike's Peak.

WHAT THE NEW MOTOR WILL DO—IF SUCCESSFUL.

If it prove to be true, the possible results are beyond the imagination of the wildest dreamer. The steam engine will disappear. The motive power of the world will be cold water and air. The demand for coal will vanish, for the force can be converted into heat, and will thus supply warmth as well as motion. Smoke will become an extinct nuisance. Trains will dart along the railroad at the minimum of expense and the maximum of velocity, and the problem of cheap transportation will be forever solved. A very great part of the cost of manufacturing will be saved. Flying machines will become perfectly practicable, for here is a force that far exceeds that exerted by a bird in proportion to its weight. Steamships will flash across the ocean, and the vast amount of room now used in storing coal, &c., will be saved. The danger of fire and explosion on sea and land will be greatly lessened. Although steam has never been successfully applied to artillery this new power perhaps may be. The general of the future will then go forth to meet an army with a few iron pipes and boxes, a pail of water, a force pump, and a million or so of bullets. Thus equipped he will sweep off the foe by regiments. There is no end to the possible powers, uses, and benefits of this invention should it prove to be what is claimed for it. The whole world will be the gainer to an inconceivable extent. The enormous fortune sure to be realized by the inventor and his ring of backers will be well deserved, and the name of Keely will be known to the end of the world and the end of time.—Chicago Tribune.

THE GRECIAN KNOT.

For the benefit of our lady readers, we give what a woman writer says concerning the Grecian knot, a coiffure now coming into favor: "About one woman out of twenty-five has a head and features of the shape necessary to make this style becoming. Given a broad, half-high forehead, rather straight nose, well rounded face and throat, and the careless knot of hair low in the nape of the neck, with a pure, white part in the center of the head, from which the hair ripples naturally over the temples and ears, is beautiful, making the wearer a Greek goddess at once, or, what is better now a-days, a charming American woman. But take the remaining twenty-four

woman, who have all kinds of foreheads and features, and who are stately with the hair massed on the very top of their heads, or braided and banded smoothly neither high nor low, or bewitchingly coquettish and girlish with a chateaubain braid with a curl or two, finger puffs above the forehead and little rings falling over their pretty pink ears, narrow temples and the cheeks by nearly obscuring them, and what is the result? The stately woman looks prim and belittled; the coquettish one is ten years older, and in many cases startling defects of features, or odd expressions, never before noticed by those who knew them best, and to whom they were once pretty, are developed by the change.

ADVERTISEMENTS.

HUDSON'S Practical Farm Account

AND

REFERENCE BOOK.

The farmers of the country have long experienced the want of a practical plan of farm accounts which would, without too much labor, enable them to keep clearly and succinctly their farm accounts, and an intelligent record of farm affairs.

There have been many attempts at various times to occupy this ground. So far as our own observation goes, the failures which have marked nearly all these attempts up to this time arise: first, that the plans for keeping the accounts were either so intricate and expensive as to be refused on that ground, or so simple as to be merely a memorandum of affairs.

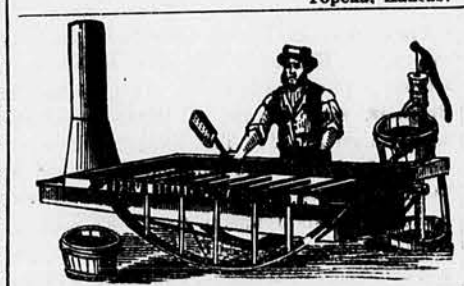
The preparation of the "Practical Farm Account and Reference Book" was suggested while the writer was engaged in farming, endeavoring to make the publications, which he was in possession of, answer the purpose of account books for the farm. The finishing of the work has been deferred from year to year, until the present time. In its scope and character it will materially differ from any similar work published combining an immense amount of practical information in tabular form, such as every farmer has felt the need of. Among its prominent features will be found all the many tables of weights and measures of any practical utility. No. of trees and plants per acre, at any given distance, amount of seed per acre for all kinds of produce, interest tables showing at a glance the interest in any given amount for any length of time, rates of interest in every State, tables giving wages due at any given rate per month or day for any given time, tables giving period of gestation in all animals, temperature of blood and pulse of animals, legal weights of grain, etc., etc., in each State, rates of postage, weights of various woods, Receipts, and a vast amount of Miscellaneous and valuable information for reference. This, in connection with the "account book," combining diary, ledger, inventories, register of crops, stock, etc., etc., bound in one book, finely printed and finished substantially, at a price within the reach of every farmer in the land. The whole plan is so simple that any farmer or his son or daughter can keep them, and thus secure to every farmer a systematic and business like history of his year operations, and whether they have brought him loss or gain. A table, giving more accurately its contents, will be published in the FARMER at an early date. It is expected that the cost of this book will not exceed two dollars, which will be very little more than the same size blank book is worth. In answer to a number of enquiries, would state that

THE FARMER'S ACCOUNT AND REFERENCE BOOK WILL BE published about September 1st 1875. All orders and correspondence should be addressed to

J. K. HUDSON,

Topeka, Kansas.

THE ONLY RECOGNIZED STANDARDS IN CANE MACHINERY are the
Cook Evaporator and Victor Cane Mill.
The 21,000 COOK EVAPORATORS are in use, and 13,000 VICTOR CANE MILLS; ALL WARRANTED.
They have taken the
First Premium at 117 State Fair.
All attempts, thus far, to equal these unrivaled machines by other contrivances have SIGNALLY FAILED ON TRIAL. Planters can't afford to risk crops of cane on light, weak, unfinished Mills that break or choke, or on common pans or kettles, that do SECOND-CLASS WORK, and ONLY HALF ENOUGH at that.
The Sargo Hand-Book and Price-List sent Free.
BLUMER MANUFACTURING CO.,
664 to 694 West Eighth St., CINCINNATI, O.,
Manufacturers of Cane Machinery, Steam Engines, Shaker Threshers, Wood-sawing Machines, Corn and Cob Crushers, Farm, School, and Church Bells.



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Bookseller and Stationer,
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Has a new and complete stock, and will sell at lowest Cash Rates.
School, Law and Miscellaneous Books,
Staple and Fancy Stationery, Chromos, Copying Presses, etc., and all goods usually found in first-class Book and Stationery Houses. Pictures Framed to order. A large stock of Choice Wall Papers, Croquet, Has on hand for the trade Fine Papers, Letter, Legal and Foolscap—Envelopes in quantity. Correspondence solicited. Address:
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A Book Store at your Door.

FOR ANY BOOK published in this country that you may want, send the publisher's price to

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Bookseller and Stationer,
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FULL LINES OF
School Books and Educational Works
on hand. All letters promptly answered.

NOTES, Checks, Drafts, etc., printed on short notice, and in fine style, at the KANSAS FARMER Book and Job Printing office, Topeka, Kansas.

In answering an Advertisement found in these columns you will confer a favor by saying you saw it in the KANSAS FARMER.

THE KANSAS STATE Agricultural College

NOW furnishes a THOROUGH and DIRECT EDUCATION to those who intend to be FARMERS, MECHANICS, or to follow other Industrial Pursuits.

THE FOUR COURSES OF INSTRUCTION, FARMERS, MECHANICS, BUSINESS and WOMEN, are prepared with express reference to these things:

1. What the student knows when received;
 2. The time he will remain;
 3. The use which is really made of a given science in his proposed occupation, the studies being so arranged that, at the close of each year, he will have gained that knowledge which is of most value in his business.
- The FIRST OBJECT in each course is to make every student a Master of the English Language, and an Expert in its use; and also, skillful in Mathematics as employed in every day life, including Book Keeping, Business Law and Industrial Drawing.

In addition the special object of the

FARMERS' COURSE

is to give him a practical knowledge of the Structure, Growth and value of Plants; of Light, Heat and Moisture, and of Inorganic, Organic, Analytical and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology, and particularly of Practical

AGRICULTURE AND HORTICULTURE,

including such Instruction and Drill in the Field, in the Handling of Stock, in the Nursery, and in the Wood and Iron Shops as will enable the graduate to Perform Readily each of the varied operations of Actual Farm Life.

In the other courses, the special studies are equally determined by the requirements of the proposed vocation. To MECHANICS, applied mathematics and industrial drawing are given instead of botany, chemistry and zoology, as above; and Shop Practice in place of Practical Agriculture.

The instruction in CHEMISTRY and PHYSICS is fully equal to that of the best eastern institutions, including Practice in Laboratories, and

SUPERIOR ADVANTAGES

are offered to students of Higher Chemistry, to Mineralogists, Druggists, Operators and Workers in Metals.

Full collections of the Plants, Insects and Birds of Kansas are being made as rapidly as possible.

THE MECHANICAL DEPARTMENT

gives Daily Practice in the following well equipped Shops and Offices:

1. CARPENTER.
2. CABINET.
3. WAGON.
4. BLACKSMITH.
5. PAINT.
6. SEWING.
7. PRINTING.
8. TELEGRAPH.

THE COURSE FOR WOMEN

is Liberal and Practical, including Instrumental Music. Each student is required to take not less than one Industrial and three Literary studies.

TUITION ABSOLUTELY FREE, and no contingent fees, except for use of pianos and organs.

Boarding ranges from \$2.75 to \$4 per week.

Students PAID FOR LABOR on the Farm and in the Shops, which is not educational, and which the institution needs performed.

The NEXT TERM begins August 20, 1874, when New Classes will be formed.

For further information apply to

J. A. ANDERSON, President,
Manhattan, Kansas.

The Patrons Mutual Insurance Association.

OFFICERS—BOARD OF DIRECTORS: M. E. Hudson, Master of State Grange; Wm. Sims, Overseer; W. F. Popenoe, F. H. Dumbauld, J. B. Shaeffer, Executive Committee; A. Washburne, Treasurer; S. H. Downs, Secretary.

RATES.—The printed by laws and articles of association give the plan and rates. Our plan is to insure farm property belonging to Patrons. Our rates are based upon the experience of the Michigan Farmers' Mutual Insurance Association.

In order to be safe, the Association fixes the rate at one-fifth higher than the average rate of all the companies in Michigan. The difference in the construction of buildings, and danger from prairie fires, adds something to risks in Kansas as compared with Michigan.

We give the following as an illustration of the difference between our rates and joint stock companies.

Joint stock company lowest cash rate, per annum on \$1,000.....\$5 00

On each \$1,000, for three years.....\$15 00

A policy fee of.....2 00-17 00

which amount is paid in advance.....\$5 00

The Patrons Association rates are,

A membership fee of.....\$5 00

On policy of \$1,000, first year's premium, \$1 25

cents on each \$100.....\$4 00

Total cash paid.....\$4 00

A policy is then issued for 3 years, and a premium note taken for the remaining 2 years of.....\$5 00

Total cost of insurance for 3 years.....\$9 00

The premium note is liable to assessment at any time to pay expenses and losses. On a policy of \$500 the cost is as follows:

Membership fee.....\$1 25

Premium for first year.....\$4 00

Total cash payment.....\$5 25

Note for remaining two years.....2 50

Total cost for three years.....\$7 75

Our rates are about one-half of the joint stock company rates, and only a small part of the premium required to be paid in cash.

Address S. H. DOWNS, Secretary, Topeka, Kan.

The Kansas Farmer

BOOK AND JOB

PRINTING

ESTABLISHMENT,
Kansas Ave., bet. Sixth & Seventh,
TOPEKA, KANSAS.

Is supplied with the best Newspaper, Book and Job Presses, and the proprietors are prepared to execute, on the shortest notice, in a neat and workmanlike manner, and at the lowest living prices, every description of

Job Printing,

From a Visiting Card to a mammoth Poster.

We use the best of stock, employ competent workmen, deliver our work when promised, and guarantee satisfaction to our customers.

Orders by mail promptly attended to.

HUDSON & ROOT,

J. K. HUDSON, Proprietors. FRANK A. ROOT.

THIS PAPER IS ON FILE WITH

Where Advertising Contracts can be made.

Let us Smile.

Switzerland proposes to "watch" our Centennial. Just lever alone, and she'll come out all right yet. *Commercial Advertiser*. She has already wheeled into line and joined the movement.

"Sir," said an old judge to a young lawyer, "you would do well to pluck some of the feathers from the wings of your imagination and stick them in the tail of your judgment."

An old lady, on hearing that a young friend had lost his place on account of misdeemeanor, exclaimed: "Miss Demosnor? Lost his place on account of Miss Demosnor? Well, well! I'm afraid it's too true that there's a woman at the bottom of a man's difficulties!"

At a circus, while the rope-walker was going through his performance, a boy about twelve years old turned to an acquaintance of the same age and remarked: "Tom, don't you wish you could do that?" "Yes, I do, sadly replied Tom, 'but my folks make me go to school and are determined that I shan't never be nobody."

It never pays to fret and growl
When fortune seems our foe;
The better bred will push ahead
And strike the braver blow.
For luck is work
And those who skirk
Should not lament their doom,
But yield the play
And clear the way,
That better men have room.

At a camp-meeting last summer, a venerable sister began the hymn—
"My soul be on thy guard:
Ten thousand foes arise."

She began in shrill quavers, but it was pitched too high. "Ten thousand—Ten thousand," she screamed, and stopped. "Start her at 5,000!" cried a converted stock broker present.

A Virginia paper announces the marriage of Miss Jane Lemon to Mr. Ebenezer Sweet; whereupon somebody perpetrates the following:

"How happy the extremes do meet
In Jane and Ebenezer;
She's no longer sour but sweet,
And he's a Lemon squeezer!"

Very stern parent indeed—Come here, sir! What is this complaint the schoolmaster has made against you? "Much injured youth—'It's just nothing at all. You see, Jimmy Hughes bent a pin, and I only just left it on the teacher's chair for him to look at, and he came in without his specs and sat right down on the pin, and now he wants to blame me for it."

An enthusiastic *Americanist* reports to the Brooklyn *Argus* the discovery of graven stone somewhere in the Catskills which is thought to be of extraordinary antiquarian interest. On the base are cut in rude letters the following:

1643.
TH-188-TO-NEWA-SPUH-
ER-BFO-RCATTLET-OSCRAT-
ON-THIR-BA-CKSON
S. B. AN-TH-ONIE

It is supposed to commemorate some great historical event of the early Dutch settlement of New York.

A young lady was yesterday standing on the wharf at the foot of Second street, waving her handkerchief at a schooner lying in the stream. "Know anybody on board?" queried her companion, as he came along. "No, I don't; but they are waving their handkerchiefs at me," she replied. "Hand (ha!) ker (hoo!) chiefs!" he exclaimed, dropping his basket and leaning against a woodpile: "why, them's the men's shirts, hung up to dry?" She waved into a warehouse.

Far down in the sunless retreat of a cellar,
I'll hide me from syllables swarming like flies;
A wretched, unfortunate, mis-maddened spell-
er,

Who cares not a straw for the costliest prize.
Burn up my old school-books to day, if you love me!

Drown Webster and Worcester deep in the well!
And write on the knocker so silent above me:
"There's nobody here that can read, write or Spell!"—*Independent*.



Bake better; burn less fuel; give better satisfaction, and are the standard Stoves of the day.
Extension Top Stoves, with High or Low Down Reservoir.

EVERY STOVE WARRANTED.

BUCK'S
Guarantee,

For Coal or Wood, are the only Soft Coal Cooking Stoves that always give perfect satisfaction. They Bake, Broil and Roast equal to any Wood Stove; are fitted with our Patent Chilled Iron Linings, which last as long as any five sets of ordinary linings. Their operation is perfect.
Extension Top, with High or Low Down Reservoir. We also manufacture Enamelled Work of all kinds, Culinary and Plumber's Goods &c.

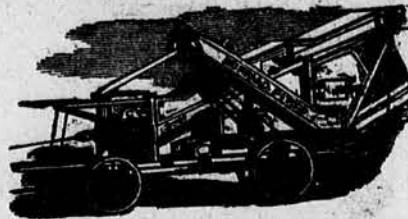
Buck & Wright,
729 and 731 Main Street, St. Louis. Manufacturers of varieties of Cooking and Heating Stoves. Sample Cards and Price Lists furnished on application.

\$250 A MONTH—Agents wanted everywhere. Business honorable and first class. Particulars sent free. Address J. WORTH & CO., St. Louis, Mo.

10 DOLLARS PER DAY AGENTS WANTED to sell THE IMPROVED HOME SHUTTLE Sewing Machine. Address Johnson, Clark & Co., Boston, Mass.; New York City; Pittsburgh, Pa.; Chicago, Ill.; or St. Louis, Mo.

CHEAP JOB PRINTING.
CHEAPEST JOB PRINTING HOUSE IN THE STATE connected with the office of the KANSAS FARMER. Send in your orders for job printing.

BUFFALO PITTS Thrashing Machines, HORSE POWERS, &C.



ACKNOWLEDGED to be far ahead of any other machine ever built, for durability, fast thrashing, cleaning, and saving grain. A perfect success in Thrashing, Cleaning and Saving.

Flax and Timothy.

Such as the NEW SHAKES SHOE, which has now been in use for two years, has earned the praise of every one who has used it. It is a real pleasure to see it run. No more noise than a parlor sewing machine. The change in the mill are not such as to attract one's immediate attention, as does the end Shake Shoe, nevertheless they are even of GREATER importance.

The Concave Raisers, Stalkers Raisers, &c., &c., all must be seen to be appreciated.
For over thirty years the BUFFALO PITTS has been offered SOLELY on its merits, and during all that time, its superior WORKING QUALITIES and its DURABILITY have given it the first place in the favor of every Farmer and Thresherman. Its constant effort is to benefit and please the farming community, and every improvement, however small, means

Better Work, Faster Work, Easier Work.
Five sizes of Separators and Horse Powers made. Powers mounted or down as preferred.

1875 Mounted Powers.
The 1875 mounted power is a great improvement on that of 1874. Quite important changes are made in the construction of the power, which make it FIRMER, MORE DURABLE, MORE CONVENIENT, and EASIER DRAFT.

In offering you the 1875 Buffalo Pitts Thrasher and Horse Powers, I am glad to assure you that you will find they excel every other machine in ALL things which make a first-class thrasher.
For durability of materials, quality of workmanship and beauty of finish, and, above all, in capacity to do BETTER WORK, MORE OF IT, and EASIER, the Buffalo Pitts is

Noted all Over the World.
Send for Illustrated Circulars, &c., addressing
JAMES BRAYLEY,
Cor. Beach & Sebor St., CHICAGO,
6 North Main St., SAINT LOUIS, MO.

Farm Stock Advertisements.

SHANNON HILL STOCK FARM.

ATCHISON, KANSAS.
Thoroughbred Short-Horn Durham Cattle, of Straight Herd Book Pedigree, Bred and for sale.
Also Berkshire pigs bred from imported and premium stock, for sale singly or in pairs not akin.
Address GLICK & KNAPP.
P. S. Persons desiring to visit the farm, by calling on Mr. G. W. Glick in the city of Atchison, will be conveyed to and from the farm free of charge.

HIGHLAND STOCK FARM,

BEECHER, WILL CO., ILL.,
On Chicago, Danville and Vincennes R. R., 40 miles south of Chicago; 1/4 mile from Station.

T. L. MILLER,

Importer and Breeder of Hereford Cattle and Cotswold Sheep.
The Herefords are the best grazing cattle. They mature early and are hardy.
Make the largest gain on a given amount of feed.
Make large weights, and good quality.
My Hereford Bull, Sir Charles, weighs 2,700 pounds.
Hereford Cows weigh from 1,300 to 1,800 pounds.
The Cotswold Sheep are hardy and will shear from 8 to 10 lbs.
They weigh from 150 to 200 pounds and over.

STOCK FOR SALE.
Correspondence solicited.

NORMAN HORSES



E. DILLON & CO.
NORMAN, ILLINOIS.
McLain Co., Illinois.

Have made the Breeding and importing of Norman Horses a specialty for the last 30 years have now on hand and for sale 100 head of Stallions and mares on terms as reasonable as the same quality of stock can be had for anywhere in the United States. Send for illustrated catalogue of stock.

E. DILLON & CO.

REPAIRS.
For Clippers, Reapers and Mowers.

Constantly on hand. Address
H. REINSTEADLER,
Wholesale Dealer in Farm Machinery,
ST. LOUIS, MO.

TO TREE DEALERS & NURSERYMEN.

OUR immense Nursery Stock, now covering over 800 acres, closely planted, and comprising a general and complete assortment of fruit and ornamental trees, &c., together with the well known superior quality of our stock, enables us to offer great inducements.
We are fully prepared in every respect to meet the demands of the wholesale trade. Send for wholesale Price List.
BLAIR BROTHERS,
Proprietors Lee's Summit Nurseries,
Lee's Summit Jackson County, Mo.

Jersey Bulls For Sale.

One five years old, the other two years old, both registered in Herd Book. For sale, cheap, apply to
CHARLES KEARNY,
Wathena, Kansas.

ROTATING HORSES.

Of Fashionable Breeding,
HAMBLETONIAN, STARS AND
Clays, etc., etc. For Sale at Prairie Dell Farm,
SHAWNEE COUNTY, (near TOPEKA, KAN.)
R. I. LEE.

JOB PRINTING.

EVERYTHING from a card to a double-sheet Poster executed in the finest style at THE FARMER office.

NOTE HEADS, Monthly Statements, Envelopes, etc., neatly and expeditiously printed at the Book and Job office of the KANSAS FARMER, Topeka, Kan.

Land Advertisements.

500,000 ACRES OF Michigan Lands FOR SALE.

The Lands of The
Jackson, Lansing & Saginaw R. R. Co.,
ARE NOW OFFERED FOR SALE AT
LOW PRICES AND ON LONG TIME.

The Railroad is constructed and in operation from Jackson to Gaylord, a distance of two hundred and thirty-six miles, and will soon be completed to the Straits of Mackinaw, a further distance of about fifty-five miles.

Particular attention is called to the large tracts of the best White and Norway pine timber along the line of the road, and upon the Au Sable, Cheboygan, Muskegon, and Manistee Rivers, the most important logging streams in the State.

The farming lands of the Company include some of the most fertile and well watered hard-wood lands in the State. Especial attention is called to the farming lands in Crawford, Otsego, and Cheboygan counties, which are high and rolling; timbered mainly with the finest hard maple; soil, black sandy loam, and abounding in springs of the purest water. These counties are being rapidly settled, and the lumbering business in the vicinity will afford to farmers a first-rate market for produce for many years.

TERMS OF SALE.
For pine lands, one-fourth down, and remainder in three equal annual payments, with interest at seven per cent. For farming lands to settlers, longer time will be given if desired.
For title of lands, further information, or purchase, apply to
O. M. BARNES,
Land Commissioner,
Lansing, Mich.

The State of Oregon

Offers great attractions to those in search of new homes, to-wit:

Healthy and attractive diversity of surface.
Grand scenery.
Mild climate. No excessive cold or oppressive heat. Average temperature, summer 67° winter 38°. Thunder storms rare, hurricanes unknown.
Death rate lower than in any other State.
Soil of unsurpassed fertility, especially suited to cereals. No failure of crops in thirty years.
Great abundance of fruit. Stock raising very profitable. As a farming country, the State is not surpassed by any part of the Union.
Abundance of good and cheap public, railroad and private lands.
Variety of timber of exceptional excellence for industrial purposes.
Great mineral resources, especially coal, iron, lead, gold and silver.
Fine natural water system, vast water power.
Good market for agricultural products, owing to short transportation to the Pacific ocean, and direct exportation to all parts of the world. Railroad facilities. Navigable rivers, including the great Columbia.

Active commerce. Value of exports in 1874, Ten Millions of Dollars, Gold.
Every advantage enjoyed in civilized countries.
Liberal laws. Good schools. Moderate taxes.
Only nominal State debt.

Pamphlets, with Map and full descriptions of the State, and all needed advice and assistance, may be had, free of charge, on application to the

Eastern Office.
Oregon State Board of Immigration,
Room No. 8,
Transcript Building,
Boston Massachusetts.

Land! Land! Land!

HOMES FOR THE PEOPLE.
350,000 ACRES
IN
Bourbon, Crawford and Cherokee Co's,
KANSAS.

STILL OWNED AND OFFERED FOR SALE BY THE
Missouri River, Fort Scott and Gulf
Railroad Company,
On credit, running through ten years, at seven per cent. annual interest.
DISCOUNT FOR CASH IN FULL AT
DATE OF PURCHASE.
For further information address
John A. Clark,
LAND COMMISSIONER,
Fort Scott, Kan.

Wholesale Grange Supply House.
JOHN A. WEST,
Successor to DICKINSON & Co.,
Has Removed to 213 West Madison
Chicago.

WHOLESALE DEALER IN
DRY GOODS,
BOOTS AND SHOES,
CLOTHING, HATS, CAPS,
And General Merchandise.

GRANGES, FARMERS' CLUBS, AND ALL CONSUMERS supplied in any desired quantities. Catalogues of prices for spring and summer trade, containing full information regarding my manner of doing business will be sent free on application to any address.
All orders promptly and carefully filled 25 to 50 per cent less than retailer's prices.

EAGLE
Best Power
Fills the
Heavy work
of Trees should
have one.

W. H. Banks & Co.
Wholesale & Retail
Farm & Garden
SEEDS,
Horticultural
TOOLS, &c.
34 & 36
S. Canal St.,
CHICAGO,
Circulars sent free.

SENT FREE and postpaid—
THE BEVERLY
BUDGET \$40 to \$75 CASH per week to all, at home or traveling. Something new. Address: The Beverly Co. Chicago.

SALE BILLS.—All in want of Sale Bills should call at or send to the KANSAS FARMER Job Office where the work will be done promptly and at the lowest living prices.

THE PROMINENT ADVANTAGES OF THE NEW LOW RESERVOIR "STANDARD"

Are Economy in Price,
Superior Construction,
Quick & Uniform Baking.

Great Durability & Handsome Designs,
And Giving PERFECT SATISFACTION Everywhere.

MADE ONLY BY
Excelsior Manufacturing Company,

612, 614, 616 & 618 N. MAIN STREET ST. LOUIS, MO.
AND SOLD EXCLUSIVELY BY
A. W. KNOWLES & CO.,
TOPEKA, KANSAS.

Established 1869.
Bischoff & Krauss,
DEALERS IN

Hides, Furs, Tallow & Wool.
FOR WHICH THEY PAY HIGHEST MARKET PRICES IN CASH.
Also, Manufacturers of Harness, Saddles, Whips and Collars. We keep the largest and best stock in the City and will not be undersold by any firm East or West.
No. 67 Kansas Avenue, North Topeka, Kansas.

THE "DEERE" GANG PLOW.

DEERE, MANSUR & CO.,
Manufacturers Depot for the
Deere Gang & Sulky Plows,
THE HOOSIER GRAIN DRILL,
AND ALL KINDS OF
FARM MACHINERY.
Kansas City, Mo.

Descriptive Circulars sent free, on application.

NEW FORCE-FEED
Buckeye Grain Drill
FOR SALE
FOR RENT
FOR HIRE
FOR LEASE
FOR PURCHASE
FOR EXCHANGE
FOR CASH
FOR CREDIT
FOR COMMISSION
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COLMAN & CO.
COMMISSION MERCHANTS,
612 North Fifth ST., LOUIS, MO.

RECEIVE and sell all kinds of Produce, including Grain, Potatoes, Onions, Wool, Hides, Fats, Grass, and Clover Seeds, Butter, Eggs, Poultry, Game, &c.

Our long experience as Commission Merchants and our excellent facilities, enable us to get the very highest market rates. All letters of inquiry promptly answered. The Business of the

Patrons of Husbandry
is especially solicited. We are also the manufacturer's agents for the sale of the THOMAS SMOOTHING HARROW, for which circulars will be sent on application. We beg to refer to D. W. Adams, Master National Grange, Waukon, Iowa; O. H. Kelley, Secretary National Grange, Washington City; Gen. W. Duane Wilson, Secretary Iowa State Grange; T. R. Allen, Master Missouri State Grange; J. E. Hudson, Editor KANSAS FARMER, Topeka, Kansas.
Address or consign to COLMAN & CO., St. Louis Missouri.

12 Chromos for \$1. The grandest chance ever offered agents. We will mail to any address, post paid, 12 beautiful Oil Chromos, size 12x11, mounted, on receipt of \$1. Sell for \$3 in an hour. Try a Chromo agency, it is the best paying agency out. Everybody loves and buys pictures. We have work and money for all, men and women, boys and girls, whole or spare time, daytime or evenings, at home or travelling. Include \$1 in a letter, Chromos by return mail. They sell at sight.

WANTED Agents for the best selling Prize package in the world. It contains 15 sheets paper, 15 envelopes, Pen, Pencil, Ruler, Patent Paper, and a Gold Watch that costs from \$50 to \$100. It sells and trades readily, for from \$25 to \$50. If you wish a watch for your own use, or to make money on, try this. Price \$17 only. We will send this watch, C. D. B. subject to examination, if you send \$3 with the order, the balance of \$15 you can pay the Express Co. if the watch proves satisfactory.

BEST Selling Imitation Gold Watch, in the market. This is a Pure Gold Silver Hunting Cased watch; English rolled Gold plate; sunk Second Dial; Full Jeweled; Expansion Balance; Nickel Movements; beautifully engraved Cases; and is equal in appearance to a Gold Watch that costs from \$50 to \$100. It sells and trades readily, for from \$25 to \$50. If you wish a watch for your own use, or to make money on, try this. Price \$17 only. We will send this watch, C. D. B. subject to examination, if you send \$3 with the order, the balance of \$15 you can pay the Express Co. if the watch proves satisfactory.

ALL CAN make splendid pay selling our goods as Floor. We have other novelties which are as Staple as Floor. Send stamp for our illustrated catalogue. Address P. P. GLUCK, New Bedford, Mass.

THE TOLL GATE! Prize Picture sent free! An ingenious gem! 50 objects to find, address with stamp, E. C. ABBEY, Buffalo, New York.

Self Propelled
For Cripples
Can be easily
er in or out
one having the
State your
stamp for illus-
of different
Please mention
this paper.

\$200 A MONTH TO AGENTS
to sell the IMPROVED "HOME SHUTTLE" SEWING MACHINE, the only practical, low-priced "Lock Stitch" Sewing Machine ever invented. Address JOHNSON, CLARK & Co., Boston, Mass.; New York City; Pittsburgh, Pa.; Chicago, Ill.; Louisville, Ky.; or St. Louis, Mo.

GLOBE CHURN
Every One Using it
once will use no other.
Three sizes made, holding
five, seven and ten gallons.
Circulars sent free.
Cavaliers wanted where we
have no agents.

ATTENTION, OWNERS OF HORSES.
Ask your Harness Maker for the ZINC COLLAR PAD. They are warranted to cure any sore neck on horse or mule, or money refunded if printed directions are followed. Send for sample. Zinc Collar Pad Co., Sole Manuf'rs, Buchanan, Mo.